TRANSPORTATION OF HAZARDOUS MATERIALS

(100-60)

HEARINGS

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

OF THE

COMMITTEE ON
PUBLIC WORKS AND TRANSPORTATION
HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

SECOND SESSION

MAY 19, 25, 1988

Printed for the use of the
Committee on Public Works and Transportation

U.S. GOVERNMENT PRINTING OFFICE
88-866 WASHINGTON : 1988

H641-11

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, DC 20402

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

GLENN M. ANDERSON, California, *Chairman*

ROBERT A. ROE, New Jersey
NORMAN Y. MINETA, California
JAMES L. OBERSTAR, Minnesota
HENRY J. NOWAK, New York
NICK JOE RAHALL II, West Virginia
DOUGLAS APPLEGATE, Ohio
RON DE LUGO, Virgin Islands
GUS SAVAGE, Illinois
FOFO I.F. SUNIA, American Samoa
DOUGLAS H. BOSCO, California
ROBERT A. BORSKI, Pennsylvania
JOE KOLTER, Pennsylvania
TIM VALENTINE, North Carolina
EDOLPHUS TOWNS, New York
WILLIAM O. LIPINSKI, Illinois
J. ROY ROWLAND, Georgia
ROBERT E. WISE, JR., West Virginia
KENNETH J. GRAY, Illinois
PETER J. VISCLOSKY, Indiana
JAMES A. TRAFICANT, JR., Ohio
JIM CHAPMAN, Texas
LOUISE McINTOSH SLAUGTHER, New York
JOHN LEWIS, Georgia
PETER DEFAZIO, Oregon
BENJAMIN L. CARDIN, Maryland
BILL GRANT, Florida
DAVID E. SKAGGS, Colorado
JIMMY HAYES, Louisiana
CARL C. PERKINS, Kentucky
BOB CLEMENT, Tennessee

JOHN PAUL HAMMERSCHMIDT, Arkansas
BUD SHUSTER, Pennsylvania
ARLAN STANGELAND, Minnesota
NEWT GINGRICH, Georgia
WILLIAM F. CLINGER, JR., Pennsylvania
GUY MOLINARI, New York
E. CLAY SHAW, JR., Florida
BOB McEWEN, Ohio
THOMAS E. PETRI, Wisconsin
DON SUNDQUIST, Tennessee
NANCY JOHNSON, Connecticut
RON PACKARD, California
SHERWOOD BOEHLERT, New York
DEAN A. GALLO, New Jersey
HELEN DELICH BENTLEY, Maryland
JIM LIGHTFOOT, Iowa
DENNIS HASTERT, Illinois
JAMES M. INHOFE, Oklahoma
CASS BALLENGER, North Carolina
FRED UPTON, Michigan

SUBCOMMITTEE ON SURFACE TRANSPORTATION

GLENN M. ANDERSON, California, *Chairman*

NICK JOE RAHALL II, West Virginia
DOUGLAS APPLEGATE, Ohio
DOUGLAS H. BOSCO, California
ROBERT A. BORSKI, Pennsylvania
JOE KOLTER, Pennsylvania
EDOLPHUS TOWNS, New York
WILLIAM O. LIPINSKI, Illinois
J. ROY ROWLAND, Georgia
ROBERT E. WISE, JR., West Virginia
KENNETH J. GRAY, Illinois
JAMES A. TRAFICANT, JR., Ohio
H. MARTIN LANCASTER, North Carolina
LOUISE McINTOSH SLAUGHTER, New York
BILL GRANT, Florida
ROBERT A. ROE, New Jersey
NORMAN Y. MINETA, California
HENRY J. NOWAK, New York
RON DE LUGO, Virgin Islands

BUD SHUSTER, Pennsylvania
NEWT GINGRICH, Georgia
WILLIAM F. CLINGER, JR., Pennsylvania
E. CLAY SHAW, JR., Florida
BOB McEWEN, Ohio
THOMAS E. PETRI, Wisconsin
RON PACKWOOD, California
SHERWOOD BOEHLERT, New York
DEAN A. GALLO, New Jersey
JIM LIGHTFOOT, Iowa
DENNIS HASTERT, Illinois
FRED UPTON, Michigan
JOHN PAUL HAMMERSCHMIDT, Arkansas (Ex Officio)

CONTENTS

Proceedings of: Page
May 19, 1988 1
May 25, 1988 227

TESTIMONY

Applegate, Hon. Doug, a Representative in Congress from Ohio 7
Batts, Lana, Vice President-Policy, American Trucking Associations 564
Berg, George L., Jr., Assistant Director, National Affairs Division, American Farm Bureau Federation 663
Clayton, Verna L., Village President, Buffalo Grove, IL, Representing the National League of Cities 459
Conrad, Vernon, Supervisor, Fresno, CA 129
Donovan, Paul, Vice President and General Counsel, Shippers Alliance for Efficient Safe Transportation 156
Douglass, M. Cynthia, Administrator, Research and Special Programs Administration, U.S. Department of Transportation, accompanied by Al Roberts, Director, Office of Hazardous Material Transportation, and George Tenley Counsel 231
Fisher, Denzel L., Emergency Management Specialist, Technological Hazards Division, Federal Emergency Management Agency, accompanied by Ms. Dorothy M. Nocita, Training Specialist, and Kevin Clark, Office of Congressional Relations 267
Fotta, Frank G., President, Railstar Control Technology, Inc 175
Gallo, Hon. Dean A., a Representative in Congress from New Jersey 18
Gargett, John B., Vice President, Research Alternatives, Rockville, MD 111
Harvison, Clifford, President, National Tank Truck Carriers, Inc 564
Jacobson, Ronald M., Director of Transportation, Rohm and Haas Company, representing the Chemical Manufacturers Association 599
McCormick, Elizabeth, Chair, Chemical Waste Transportation Council, National Solid Waste Management Association 663
Makris, James L., Director, Emergency Response Preparedness Staff, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, accompanied by Paul S. Mushovic, Office of Solid Waste 267
Massey, Barry, Manager, Hazardous Materials, Materials and Logistics Department, E.I. Dupont, Wilmington, DE, on behalf of the National Industrial Transportation League 663
Mulholland, John, President, Source Data Network, Bethesda, MD 111
Page, Edith, Senior Analyst, Office of Technology Assessment, Washington, DC, accompanied by Nancy Naismith, Program Manager, Science, Education and Technology, OTA 30
Perron, Hon. James, Mayor, Elkhart, IN 111
Rankin, Paul, Managing Director, Hazardous Materials Advisory Council 599
Rowland, Hon. John G., a Representative in Congress from Connecticut 227
Samara, Noah A., Director, Government and International Affairs, Geostar Corporation 213
Schaitberger, Harold, Director, Department of Governmental Affairs and Public Relations, International Association of Fire Fighters 645
Scheppach, Raymond, C., Executive Director, National Governors Association 459
Schiff, Jeffrey H., Executive Director, National Association of Towns and Townships 459
Sweeney, Daniel, General Counsel, Drug and Toilet Preparation Traffic Conference, National Small Shipment Traffic Conference 159
Thompson, Hugh L., Jr., Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission 267

Page

Watts, Vivian E., Secretary, Transportation and Public Safety, Commonwealth of Virginia, representing the National Governors Association 459

PREPARED STATEMENTS

Applegate, Hon. Douglas, a Representative in Congress from Ohio 13
Batts, Lana, on behalf of Thomas J. Donohue 577
Berg, George L 676
Clayton, Hon. Verna L 534
Conrad, Vernon 129
Donovan, Paul 163
Douglass, M. Cynthia 258
Fisher, Denzel L 430
Fotta, Frank G 179
Gallo, Hon. Dean, a Representative in Congress from New Jersey 24
Hammerschmidt, Hon. John Paul, a Representative in Congress from Arkansas 1
Harvison, Clifford 590
Jacobson, Ronald M 624
Lightfoot, Hon. Jim, a Representative in Congress from Iowa 3
McCormick, Elizabeth 680
Makris, James L 422
Massey, Barry 687
Mulholland, John F 131
Page, Edith B 41
Perron, Hon. James P 127
Rankin, Paul W 613
Scheppach, Raymond, C 548
Schiff, Jeffrey 555
Thompson, Hugh L 443
Samara, Noah A 217
Schaitberger, Harold A 650
Sweeney, Daniel J 170
Watts, Vivian E 479

SUBMISSIONS FOR THE RECORD

Fotta, Frank G., President, Railstar Control Technology, Inc., "Introduction to SCANTRAK" 185
Dempsey, William H., President, Association of American Railroads, statement 697
Jacobson, Ronald M., representing the Chemical Manufacturers Association, supplements to testimony: (1) responses to questions concerning the scope and function of CHEMTREC; (2) Comments on H.R. 4069 634
Makris, James L., Director, preparedness staff, Office of Solid Waste and Emergency Response, Environmental Protection Agency:
  Personnel engaged in agency training activities 277
  Digest of Federal Training in Hazardous Materials, FEMA 134/July 1987 . 287
Page, Edith B., responses to supplemental questions submitted by Hon. Dean A. Gallo 108
Perron, Hon. James P., Mayor, City of Elkhart, IN, letter supplementing testimony re cost to city to train Haz-Mat units 124
Thompson, Hugh, L., Jr., Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission:
  Types and frequency of common and serious transportation accidents 273
  Responses to Mr. supplemental questions submitted by Representative Norman Y. Mineta 274
  Copy of NRC's "Public Information Circular for Shipments of Irradiated Reactor Fuel" 366
Watts, Vivian E., Secretary of Transportation and Public Safety for the Commonwealth of Virginia, Final Report of the Hazardous Materials Task Force, December 1986 487

ADDITIONS TO THE RECORD

American Petroleum Institute, V. Kenneth Leonard, Transportation Director, letter 735
Air Transport Association of America, statement 741

Page
Bunting, Keith J., statement on behalf of the Dow Chemical Company 750
Electric Utility Companies' Nuclear Transportation Group; American Nuclear Energy Council; Edison Electric Institute; Utility Nuclear Waste Management Group, statement 754
National Motor Freight Traffic Association, Martin E. Foley, Executive Director, statement 781
National Paint and Coatings Association, Inc., Peter M. Berkery, Jr., statement 794
National Private Trucking Association, statement 809
Rosenson, Ronald, President, BEHR Precious Metals, Company, statement 822
National Propane Gas Association, Daniel N. Myers, Vice President, Government Relations and General Counsel, letter 823
Regular Common Carrier Conference, James C. Harkins, Executive Director, statement 827
Schultz, Harvey W., Commissioner, Department of Environmental Protection of the City of New York, statement 834

TRANSPORTATION OF HAZARDOUS MATERIALS

THURSDAY, MAY 19, 1988

House of Representatives,
Subcommittee on Surface Transportation,
Committee on Public Works and Transportation,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:35 a.m., in room 2167, Rayburn House Office Building, Hon. Glenn M. Anderson [chairman of the subcommittee] presiding.

Mr. Anderson. The meeting of the subcommittee will come to order.

This morning the Subcommittee on Surface Transportation is meeting to receive testimony on a major National issue, the transportation of hazardous materials.

There are a substantial number of bills pending before the Committee which address various aspects of the overall issue. I believe that it is safe to say that some, if not all, of the issues addressed in those bills have been subject to long and sometimes controversial debate.

Generally, these bills deal with routing, emergency response training, commodity flow data, and a better defined state of Federal roads and regulation of hazardous materials.

Several years ago, the Committee was instrumental in having two reports done on the transportation of hazardous materials. Those reports have been submitted to the committee by the Office of Technology Assessment, and by the Department of Transportation.

Both reports have shed some much-needed light upon the scope of the problems involved in the transportation of hazardous materials. We're anticipating comments on those reports.

Everyone who has dealt with the issues that are pending before the subcommittee knows that there are no easy answers. In the coming months, we will need the best advice of everyone concerned in order to fashion an appropriate bill that will address the issue in a complete and fair manner.

The public is entitled to the best solution that we can devise. Anything short of that is unacceptable.

I have a statement from the Hon. John Paul Hammerschmidt, and I'd like to have that made a matter of record at this time.

[Mr. Hammerschmidt's prepared statement follows:]

Statement of Hon. John Paul Hammerschmidt

Thank you Mr. Chairman. I am looking forward to these two days of scheduled hearings on the important issue of hazardous materials transportation.

Over 1.5 billion tons of hazardous materials are transported annually throughout the United States.

Hazardous materials have become a fact of life in our society. We take for granted the many benefits of modern life which come to us from the petroleum, nuclear, and chemical industries. Unfortunately, these benefits we enjoy require movement of materials during their manufacturing and processing which can cause enormous damage to our health and environment if not handled properly.

The safety record for transportation of hazardous materials has been good, but accidents still happen. We must ensure that our local communities have improved training and resources necessary to respond safely and effectively to these accidents. We must also clearly delineate Federal, State and local government roles in the regulation of hazardous materials.

The current patchwork of overlapping and inconsistent rules results in confusion, increased economic burdens, and inevitably, a less safe environment for all of us.

Mr. Chairman, I commend you for holding this valuable series of hearings on hazardous materials.

Mr. McEwen. Mr. Chairman?

Mr. Chairman?

Mr. Anderson. Mr. McEwen.

Mr. McEwen. If I may, I'd like to request unanimous consent that this statement on behalf of Mr. Lightfoot be inserted into the record at this time.

Mr. Anderson. The statement from Mr. Lightfoot will also go in the record.

[The prepared statement of Mr. Lightfoot follows:]

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON SURFACE TRANSPORTATION

HEARING ON LEGISLATION TO AMEND THE
HAZARDOUS MATERIALS TRANSPORTATION ACT

REP. JIM LIGHTFOOT

MAY 19, 1988

THANK YOU, MR. CHAIRMAN. I ALSO WANT TO EXPRESS MY APPRECIATION TO THE WITNESSES WHO HAVE TAKEN TIME TO BE HERE THIS MORNING.

IT IS VERY IMPORTANT TO HAVE SOUND POLICY FOR HAZARDOUS MATERIALS TRANSPORTATION. THE PUBLIC DEPENDS ON REGULATION IN THIS AREA TO ENSURE THAT THEY ARE NOT EXPOSED TO AN UNREASONABLE LEVEL OF RISK OF EXPOSURE TO HAZARDOUS MATERIALS.

WE NEED TO CONTINUE WITH EFFORTS TO IMPROVE TECHNOLOGY AND HANDLING PROCEDURES IN ORDER TO PREVENT ACCIDENTS INVOLVING HAZARDOUS MATERIALS THAT ARE A THREAT TO HUMAN HEALTH. BUT AS LONG AS THERE ARE HAZARDOUS MATERIALS THERE WILL BE ACCIDENTS INVOLVING THEM, AND WE NEED TO KNOW HOW TO RESPOND WHEN ACCIDENTS DO OCCUR. FOR EXAMPLE, TAKE THE CASE OF A TRAIN CRASH IN A SWITCHING YARD IN THE MIDDLE OF A SMALL OR MEDIUM-SIZED COMMUNITY. ONE OF THE TANKER CARS IS RUPTURED AND YOU CAN SMELL FUMES COMING FROM THE LIQUID THAT IS POURING OUT OF IT. THE FIRST QUESTIONS THAT MIGHT COME TO MIND ARE: WHAT CHEMICAL WAS ON THE TRAIN? IS THE CHEMICAL TOXIC? IF SO, HOW TOXIC? SHOULD

IT SIMPLY BE HOSED DOWN, OR SHOULD THE ENTIRE COMMUNITY BE EVACUATED? IS IT FLAMMABLE?--IF SO, AN EXPLOSION COULD BE JUST AROUND THE CORNER. DOES ONE CALL THE FIRE DEPARTMENT? WHAT IF THEY ARE NOT WELL-TRAINED IN THE AREA OF HAZARDOUS MATERIALS? WHERE DOES ONE CALL FOR MORE EXPERTISE ON HOW TO HANDLE THE SITUATION?

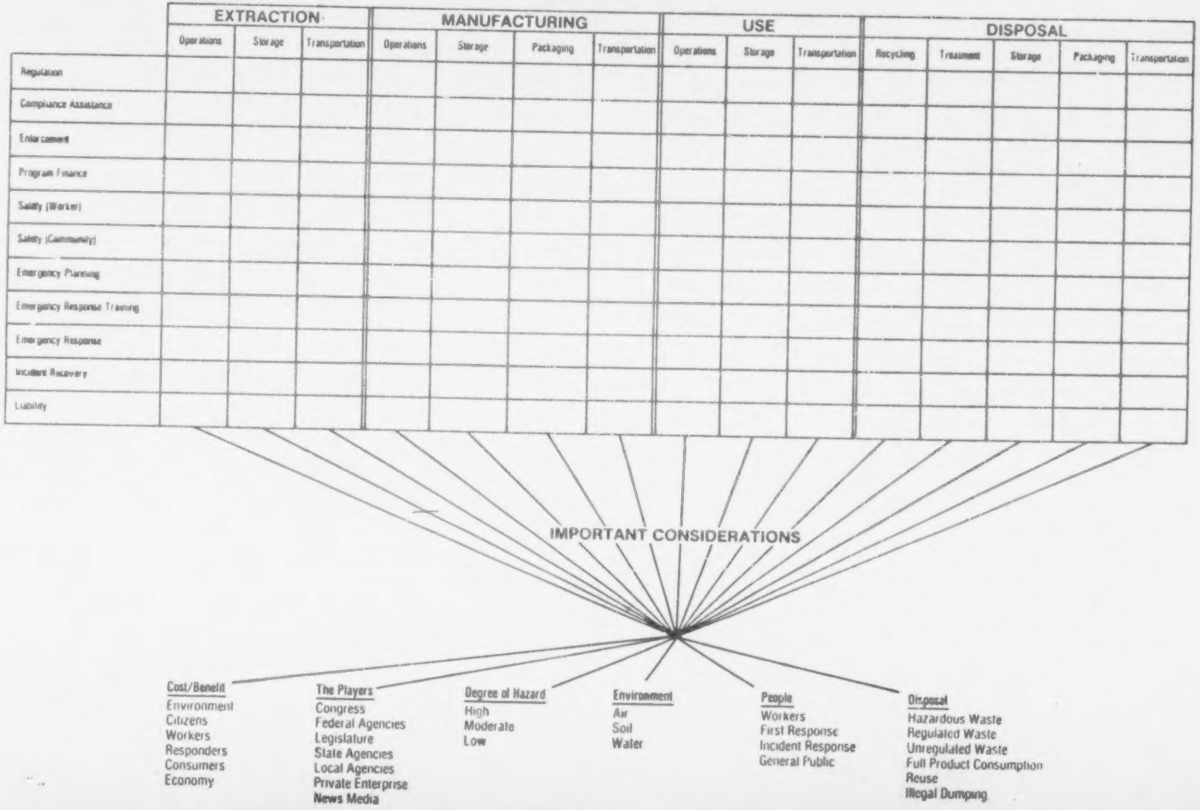
MY POINT IS THAT A RASH OF INFORMATION CAN INSTANTLY BECOME CRITICAL TO SAVING THE HEALTH AND LIVES OF HUNDREDS OR EVEN THOUSANDS OF PEOPLE. THE FEDERAL GOVERNMENT CAN HAVE A ROLE IN MAKING SURE THIS INFORMATION IS AVAILABLE WHEN IT'S NEEDED AND ALSO IN HELPING STATES AND LOCAL COMMUNITIES DEVELOP A GOOD RESPONSE PLAN.

I WANT TO NOTE THAT MR. WARREN DUNHAM, WHO WAS THE DIRECTOR OF THE IOWA DEPARTMENT OF TRANSPORTATION UP UNTIL A FEW MONTHS AGO, TOOK A GREAT PERSONAL INTEREST IN THE DEVELOPMENT OF A SOUND, COMPREHENSIVE APPROACH TO HAZARDOUS MATERIALS MANAGEMENT. IN FACT, MR. DUNHAM CAME TO WASHINGTON A FEW MONTHS AGO TO DISCUSS SOME OF HIS IDEAS WITH THE SUBCOMMITTEE STAFF AS WELL AS STAFF FROM THE ENERGY AND COMMERCE COMMITTEE AND THE FEDERAL HIGHWAY MATERIALS. AFTER MUCH THOUGHT, MR. DUNHAM DEVELOPED A GRID THAT COVERS WHAT APPEARS TO BE ALL THE NECESSARY SAFETY CONSIDERATIONS CONCERNING HAZARDOUS MATERIALS--ALL THE WAY FROM EXTRACTION TO MANUFACTURING TO USE TO DISPOSAL. I BELIEVE THIS GRID CAN SIMPLIFY OUR JOB IN DEVELOPING FEDERAL POLICY IN THIS AREA, AND I

WANT TO SHARE IT WITH YOU, MR. CHAIRMAN, AND ANYONE ELSE WHO DESIRES A COPY. IN THAT REGARD, I WOULD ASK UNANOMOUS CONSENT TO HAVE THIS ONE-PAGE GRID INSERTED IN THE RECORD FOLLOWING MY STATEMENT.

AGAIN, THANK YOU, MR. CHAIRMAN, FOR SCHEDULING THESE HEARINGS TO REVIEW OUR POLICY IN THIS IMPORTANT AREA. I LOOK FORWARD TO HEARING THE TESTIMONY OF THE WITNESSES WHO HAVE JOINED US.

IOWA
HAZARDOUS SUBSTANCE SPECTRUM
(Cradle to Grave Issues)



	EXTRACTION			MANUFACTURING				USE			DISPOSAL				
	Operations	Storage	Transportation	Operations	Storage	Packaging	Transportation	Operations	Storage	Transportation	Recycling	Treatment	Storage	Packaging	Transportation
Regulation															
Compliance Assistance															
Enforcement															
Program Finance															
Safety (Worker)															
Safety (Community)															
Emergency Planning															
Emergency Response Training															
Emergency Response															
Incident Recovery															
Liability															

IMPORTANT CONSIDERATIONS

Cost/Benefit
Environment
Citizens
Workers
Responders
Consumers
Economy

The Players
Congress
Federal Agencies
Legislature
State Agencies
Local Agencies
Private Enterprise
News Media

Degree of Hazard
High
Moderate
Low

Environment
Air
Soil
Water

People
Workers
First Response
Incident Response
General Public

Disposal
Hazardous Waste
Regulated Waste
Unregulated Waste
Full Product Consumption
Reuse
Illegal Dumping

Mr. McEwen. Thank you.

Mr. Anderson. Our first witness this morning is a member of this subcommittee, the Honorable Doug Applegate from Ohio.

The full text of your prepared statement will appear in the record. Please proceed.

TESTIMONY OF HON. DOUG APPLEGATE, A REPRESENTATIVE IN CONGRESS FROM OHIO

Mr. Applegate. Thank you very much, Mr. Chairman.

First, let me just take this opportunity to commend you for scheduling these hearings on the transportation of hazardous materials.

With over 500,000 shipments of hazardous and toxic materials being transported across this Country each and every day, there's an urgent need to act on the reauthorizing legislation which puts the control of these shipments back into the hands of the Federal, State and local governments.

I also want to thank you for giving me the opportunity to testify on my legislation concerning this matter, which is, of course, H.R. 3334. This, after careful review, you will see addresses all the problems and issues that we've heard about from our constituents.

In 1985, I began actively pursuing implementation of the key provision of the 1974 Hazardous Materials Transportation Act, that had not been implemented, and as a matter of fact was substituted with the Administration's own interpretation, despite the fact that the language in the 1974 Act was very clear.

In 1974, Congress had the foresight to call for the establishment and maintenance of a central reporting system and data center, so as to be able to provide the law enforcement and firefighting personnel of communities with technical and other information and advice for meeting emergencies connected with the transportation of hazardous materials and wastes.

The intent of this provision, Mr. Chairman, in the 1974 Act, was quite obvious. Yet, to my dismay and that of many others, this provision has never been implemented. While there are those in the Administration who will claim that there exists a system called Chemtrek, which, I might add is funded and operated by the Chemical Manufacturers' Association, which they say meets the letter of the law—it certainly is clear to everyone with any knowledge of the operations of Chemtrek that this so-called system is not the centralized, computerized reporting system called for in the 1974 law.

Chemtrek is nothing more than a glorified reference dictionary on chemical commodities. Emergency response personnel can only benefit if—and I emphasize if—they know exactly what commodities are involved in any given mishap.

Chemtrek does not tell emergency response personnel what chemicals are involved. Let me say, too, that I am not alone in my sense of frustration with this current method of operation.

The International Association of Firefighters, who have endorsed my bill, and who will be testifying before this committee perhaps next week, have called on their membership to stop using Chemtrek because of its complete inadequacy.

One of the major problems facing our communities in dealing with hazardous materials and waste is exactly what the chemical involved is, and whether or not the information provided is accurate.

The Office of Technology Assessment has already reported that over 50 percent of the placarding used on trucks to indicate their contents is in error. In other words, 50 percent of the information currently used to assist emergency response personnel is false.

Each year, we attempt—and sometimes enact—several laws mandating various safety requirements for transporting hazardous materials and waste, yet we have neither a means of enforcing nor the mechanism for guaranteeing compliance. In effect, many of these important mandates are useless.

In 1986, the Office of Technology Assessment issued a comprehensive report on the transportation of hazardous materials, concluding that a real-time data system is probably the only way to keep abreast of shipments.

However, the report goes on to say that on-line telephone access to real-time information on all hazardous materials shipments is neither feasible nor cost-effective, thus contradicting their original findings.

We contacted OTA, requesting their documentation used in drawing this conclusion, and have yet to receive their response or explanation.

I'm here today to say that a true system capable of fulfilling the original mandate of the 1974 law is not only feasible, but very cost-effective. My bill, H.R. 3334, would implement the very system called for, thus providing a degree of public health and safety never achieved before, and at absolutely no cost to the Federal, State or local government.

The cost of the system that I advocate would be borne by the generators of the hazardous wastes or materials, which not only subscribes to the theory of the polluter pays, as in the superfund law, but also would be less expensive than those internal costs now incurred by business in complying with Government regulations, according to all currently available information.

This legislation which will be discussed at this hearing by experts who have been involved in all aspects of the issue addresses the very problems that we are facing as a result of a lack of control over the 500,000 shipments and 4 billion tons of hazardous and toxic materials moved each day.

We are counting on Lady Luck to get us through mishaps that have the potential for another Bhopal. And fortunately, we've been lucky. But when our luck runs out, what will happen? Who will our constituents blame when an accident occurs that pollutes a drinking water supply, or worse yet causes death?

Local citizens and officials would be horrified if they knew that dangerous amounts and types of hazardous and toxic materials being transported through their communities illegally. And if there is a spill—and there are many examples of those—they would not have the foggiest idea of how to cope with it, or where to find out within a reasonable amount of time what they could do to prevent any serious health disaster.

The danger to the communities is very real and is getting worse as the need for disposal increases. I think that you know—and I know that my good friend and colleague Bob McEwen down in the southern part of Ohio knows—that recently there was an incident in Miamisburg, Ohio, where there were two chemical trains that came together and caused a serious accident.

Nobody knew for ten hours what was in those tanks. For ten hours, that whole community lived in threat of their lives. Ten hours—they weren't able to find out that everything was going to be okay.

There's always that possibility of mixing two kinds of chemicals which create a very toxic situation and cause death, and there you would have had a Bhopal.

With the system that we're talking about, with a computerized data reporting system, this could be found out in less than one minute, less than 60 seconds, and that's what the 1974 law proposed to do.

I can only hope that this subcommittee will act to fully implement the 1974 law, and offer to the people of this Country the protection that they deserve.

I would say to each of you on the committee that there is a film that was sent to your offices, and I hope that somebody on your staff doesn't get it and stick it in your library of tapes and books as sometimes is the case, I know—we do it. But I hope that you would pull that out and take a look at that film. It's only about 15 minutes long, and it explains the situation. It explains the system, and it would be very good and give you a lot of knowledge on this.

Mr. Chairman, thank you very much again. I look forward to working with you and enacting an effective reauthorization bill which would bring our archaic hazardous materials transportation system into the 20th century.

Mr. ANDERSON. Well thank you, Doug, for your presentation.

I think that we will direct our questions to Doug, Mr. Gallo, because both of you have bills. Both deal with a similar subject, but each does so in a different fashion.

I think that it might be clearer if we directed questions to Doug first, and then have you do your presentation.

So, I'd like to start that off with some questions that I have for Congressman Applegate.

How would this reporting system provided in your bill improve on such systems as Chemtrek?

Mr. APPLEGATE. Well, Mr. Chairman, Chemtrek is only useful when the commodity or the shipment is actually known.

Currently, when emergency response personnel contact Chemtrek, Chemtrek must then go to the chemical company in order to track down the information on the shipment. Once they have identified a shipment, only then can Chemtrek provide emergency response personnel with the information that is necessary to handle the accident.

Under our legislation, the on-site coordinator would simply access the system and give the system the number of the truck, train or barge, and within minutes the system would provide reliable information on the commodities involved in the accident and how to respond.

Mr. **Anderson**. Would your bill allow the Secretary any discretion as to what types of hazardous materials or what size shipments would be required to be placed in the reporting system?

Mr. **Applegate**. Yes.

That would all come within their jurisdiction.

Mr. **Anderson**. And approximately how much money would this data system cost on an annual basis?

Mr. **Applegate**. Well, what we're basing it on now would be a charge of $12.00 a manifest, and the 500,000 shipments each day. If it of course is determined that all 500,000 would be included, depending upon what is all involved, it could be less—but that's how many shipments per day that the system could generate. So we could generate about $2.1 billion a year.

Of this amount, it's been estimated that roughly $2 billion would be necessary to operate and maintain a real-time centralized, computerized reporting system, as well as to fund the grants program established in the bill—it's a very good one.

The exact cost of operation, due to the lack of information available, is difficult to determine. For example, how many times would the system be accessed each day by law enforcement and firefighting personnel, and how long would this communication last? Certainly, it will generate more interest and investigation by local law enforcement officials who do not now have that capability available to them.

So, much of the cost could and would be aimed at cracking down on illegal shipments, and to preventing accidents.

Mr. **Anderson**. Mr. Shuster?

Mr. **Shuster**. Thank you, Mr. Chairman.

We certainly do appreciate your testimony, Mr. Applegate.

I'm intrigued by the $12.00 per manifest charge, which would be something like $2.5 billion per year. Before I ran for Congress, I was in the computer industry for 17 years, and by no stretch of the imagination can I figure out how such a system would cost anything near that. There's the computer, the lines, the terminals, the personnel—it would seem to me that such an on-line system could be procured and operated for much, much, much less than $2.5 billion a year.

What's the basis for this figure?

Mr. **Applegate**. Well, how the figure of $12.00 came about was trying to estimate the number of accidents which would be accessed into the system, which could be perhaps, I don't know, a half or one percent, whatever it might be. That's based on 500,000.

Mr. **Shuster**. This doesn't include money that would be used to clean up the accidents, does it? This is money simply for the system.

Mr. **Applegate**. No.

Mr. **Shuster**. What I was suggesting——

Mr. **Applegate**. It's strictly the system.

There is a grant program in there that will literally fund every community in the United States with a system, both in police cars and in fire trucks. They would have the availability to access this system.

Mr. **Shuster**. Would police cars and fire trucks come out of this money as well?

Mr. APPLEGATE. No.

Mr. SHUSTER. I would suggest that staff take another look at the money. I think that you're way, way off. But certainly it's an idea that deserves very serious consideration, and I compliment you for taking the leadership, you and Mr. Gallo.

Mr. APPLEGATE. I appreciate that.

Let me just say this—you know, if this is an arbitrary figure—and if it isn't they figure that it would be accurate and could be found that it could be done with less—we're willing to work that out.

Mr. SHUSTER. Thank you.

Mr. ANDERSON. Mr. Mineta?

Mr. MINETA. Thank you, Mr. Chairman.

I have no questions other than to compliment our colleague Mr. Applegate for his, I guess, tenacity, in pursuing this as much as he has over the years.

I just want to thank him for his leadership.

Thank you very much.

Mr. ANDERSON. Mr. Clinger?

Mr. CLINGER. I have no questions, Mr. Chairman.

I also commend our colleague for his efforts in this area.

Mr. ANDERSON. Mr. Grant?

Mr. GRANT. Thank you, Mr. Chairman.

Just two brief questions.

Mr. Applegate, is the charge per shipment charged to rail as well as highway transporters?

Mr. APPLEGATE. Yes.

It's rail, barge and highway.

It's charged to the generator.

Mr. GRANT. And there's a fine for the shippers not complying, is that correct?

Mr. APPLEGATE. Yes.

There is already fines in current law, but it's not in this bill.

Mr. GRANT. How would we determine who wasn't complying? Is there going to be some enforcement mechanism established, or is there an enforcement mechanism established already?

Mr. APPLEGATE. Well, the bill will provide an enforcement. It will be that when the shipment leaves the generator, they will be accessed into the computer system, into the data system. When that arrives, then they will have fulfilled that—they will terminate that.

Mr. GRANT. There will be an audit, then, done on all shippers? Is that right? To determine whether compliance is carried out?

Mr. APPLEGATE. Yes.

I think too, what you're going to have is some other people up here who could get perhaps a little bit more into the intricacies of the bill and more about the workings of the bill. I think that you could ask them those questions, and I think they would have better answers for you.

Mr. GRANT. Thank you.

Thank you, Mr. Chairman.

Mr. ANDERSON. Mr. Petri?

Mr. PETRI. Thank you, Mr. Chairman.

I just want to join in commending our colleague Mr. Applegate for calling this repeatedly to our attention. It's an important concern.

Underlying this, I share the concern of my colleague from Pennsylvania, Mr. Shuster, that if we move in this area we should not end up with a drag on commerce and something that is very costly but not particularly beneficial.

I think that's an important concern. It is frightening and a terrible situation, but if we do nothing but throw money at it, we'll increase problems in other areas.

What we want to do is to come up with cost-effective solutions.

Mr. **Anderson**. Mr. Rowland?

Mr. **Rowland**. No questions, Mr. Chairman.

I just want to compliment our colleague, Mr. Applegate. I appreciate very much what you're doing in order to address this serious problem.

Thank you.

Mr. **Anderson**. Mr. Packard?

Mr. **Packard**. No questions, Mr. Chairman.

Mr. **Anderson**. Ms. Slaughter?

Ms. **Slaughter**. No questions, Mr. Chairman.

I would just join in with my colleagues in commending our colleague Mr. Applegate for his foresightedness.

Mr. **Anderson**. Mr. Hastert?

Mr. **Hastert**. No questions, Mr. Chairman.

Mr. **Applegate**. The enforcement that Mr. Grant had asked. This just comes to mind.

Built into this bill, of course, and I think that I mentioned it in my testimony is the fact that of course all law enforcement officers on a local level, besides the firefighters, will be equipped through the monies that will be coming in from the cost of the manifest, with accessibility into this system.

Of course, this means that they do not now have it, and all local officials will be able to zero in on those violators much more easily than they could now. Right now, it would be a very long, drawn-out process. They don't have the capability to do so.

So that would be a built-in portion of the enforcement.

Mr. **Anderson**. Thank you, Doug, for an excellent presentation.

[Mr. Applegate's prepared statement follows:]

TESTIMONY OF

HON. DOUGLAS APPLEGATE (OH)

BEFORE

THE SUBCOMMITTEE ON SURFACE TRANSPORTATION OF THE
PUBLIC WORKS & TRANSPORTATION COMMITTEE

MAY 19, 1988

MR. CHAIRMAN,

FIRST, LET ME TAKE THIS OPPORTUNITY TO COMMEND YOU FOR SCHEDULING THESE VITAL HEARINGS ON THE TRANSPORTATION OF HAZARDOUS MATERIALS. WITH OVER 500,000 SHIPMENTS OF HAZARDOUS AND TOXIC MATERIALS BEING TRANSPORTED ACROSS THIS COUNTRY EVERY DAY, THERE IS AN URGENT NEED TO ACT ON REAUTHORIZING LEGISLATION WHICH PUTS THE CONTROL OF THESE SHIPMENTS BACK INTO THE HANDS OF THE FEDERAL, STATE AND LOCAL GOVERNMENTS. I ALSO WANT TO THANK YOU FOR GIVING ME THE OPPORTUNITY TO TESTIFY TODAY ON MY LEGISLATION CONCERNING THIS MATTER, H. R. 3334, WHICH AFTER CAREFUL REVIEW, YOU WILL SEE ADDRESSES ALL OF THE PROBLEMS AND ISSUES THAT WE HAVE HEARD ABOUT FROM OUR CONSTITUENTS.

IN 1985, I BEGAN ACTIVELY PURSUING THE IMPLEMENTATION OF A KEY PROVISION OF THE 1974 HAZARDOUS MATERIALS TRANSPORTATION ACT THAT HAD NOT BEEN IMPLEMENTED AND, AS A MATTER OF FACT, WAS SUBSTITUTED WITH THE ADMINISTRATION'S OWN INTERPRETATION DESPITE THE FACT THAT THE LANGUAGE IN THE 1974 ACT WAS VERY CLEAR. IN 1974, CONGRESS HAD THE FORESIGHT TO CALL FOR THE "ESTABLISHMENT AND MAINTENANCE OF A CENTRAL REPORTING SYSTEM AND DATA CENTER" SO AS TO BE ABLE TO PROVIDE THE LAW ENFORCEMENT AND FIREFIGHTING PERSONNEL OF COMMUNITIES WITH TECHNICAL AND OTHER INFORMATION AND ADVICE FOR MEETING EMERGENCIES CONNECTED WITH THE TRANSPORTATION OF HAZARDOUS MATERIALS AND WASTES.

THE INTENT OF THIS PROVISION IN THE 1974 ACT WAS OBVIOUS. YET, TO MY DISMAY AND THAT OF MANY OTHERS, THIS PROVISION HAS NEVER BEEN IMPLEMENTED. WHILE THERE ARE THOSE IN THE ADMINISTRATION WHO WILL CLAIM THERE EXISTS A SYSTEM CALLED "CHEMTREK" WHICH, I MIGHT ADD, IS FUNDED AND OPERATED BY THE CHEMICAL MANUFACTURERS ASSOCIATION, THAT MEETS THE LETTER OF THE LAW, IT IS CLEAR TO ANYONE WITH ANY KNOWLEDGE OF THE OPERATIONS OF CHEMTREK THAT THIS SO-CALLED "SYSTEM" IS NOT THE CENTRALIZED, COMPUTERIZED REPORTING SYSTEM CALLED FOR IN THE 1974 LAW. CHEMTREK IS NOTHING MORE THAN A GLORIFIED REFERENCE DICTIONARY ON CHEMICAL COMMODITIES. EMERGENCY RESPONSE PERSONNEL CAN ONLY BENEFIT IF, AND I EMPHASIS IF, THEY KNOW EXACTLY WHAT COMMODITIES ARE INVOLVED IN ANY GIVEN MISHAP. CHEMTREK DOES NOT TELL EMERGENCY RESPONSE PERSONNEL WHAT CHEMICALS ARE INVOLVED.

LET ME SAY, TOO, THAT I AM NOT ALONE IN MY SENSE OF FRUSTRATION WITH THIS CURRENT METHOD OF OPERATION. THE INTERNATIONAL ASSOCIATION OF FIREFIGHTERS, WHO HAVE ENDORSED MY BILL AND WHO WILL BE TESTIFYING BEFORE THIS SUBCOMMITTEE LATER, HAVE CALLED ON THEIR MEMBERSHIP TO STOP USING CHEMTREK BECAUSE OF ITS COMPLETE INADEQUACIES.

ONE OF THE MAJOR PROBLEMS FACING OUR COMMUNITIES IN DEALING WITH HAZARDOUS MATERIALS AND WASTES IS EXACTLY WHAT THE CHEMICAL INVOLVED IS, AND WHETHER OR NOT THE INFORMATION PROVIDED IS ACCURATE. THE OFFICE OF TECHNOLOGY ASSESSMENT (O.T.A.) HAS ALREADY REPORTED THAT OVER 50% OF THE PLACARDING USED ON TRUCKS

TO INDICATE ITS CONTENTS IS IN ERROR. IN OTHER WORDS, 50% OF THE INFORMATION CURRENTLY USED TO ASSIST EMERGENCY RESPONSE PERSONNEL IS FALSE. EACH YEAR, WE ENACT SEVERAL NEW LAWS MANDATING VARIOUS SAFETY REQUIREMENTS FOR TRANSPORTING HAZARDOUS MATERIALS AND WASTES, YET WE HAVE NEITHER THE MEANS OF ENFORCING NOR THE MECHANISM AVAILABLE FOR GUARANTEEING COMPLIANCE. IN EFFECT, MANY OF THESE IMPORTANT MANDATES ARE USELESS.

IN 1986, O.T.A. ISSUED A COMPREHENSIVE REPORT ON THE TRANSPORTATION OF HAZARDOUS MATERIALS, CONCLUDING THAT "A REAL-TIME DATA SYSTEM IS PROBABLY THE ONLY WAY TO KEEP ABREAST OF SHIPMENTS." HOWEVER, THE REPORTS GOES ON TO SAY THAT ON-LINE TELEPHONE ACCESS TO REAL-TIME INFORMATION ON ALL HAZARDOUS MATERIAL SHIPMENTS IS NEITHER FEASIBLE NOR COST-EFFECTIVE, THUS CONTRADICTING THEIR ORIGINAL FINDING. I CONTACTED O.T.A. REQUESTING THEIR DOCUMENTATION USED IN DRAWING THIS CONCLUSION AND HAVE YET TO RECEIVE THEIR EXPLANATION.

MR. CHAIRMAN, I AM HERE TODAY TO SAY THAT A TRUE SYSTEM, CAPABLE OF FULFILLING THE ORIGINAL MANDATE OF THE 1974 LAW IS NOT ONLY FEASIBLE, BUT VERY COST-EFFECTIVE. MY BILL, H. R. 3334, WOULD IMPLEMENT THE VERY SYSTEM CALLED FOR, THUS PROVIDING A DEGREE OF PUBLIC HEALTH AND SAFETY NEVER ACHIEVED BEFORE AND AT ABSOLUTELY NO COST TO THE FEDERAL, STATE OR LOCAL GOVERNMENTS. THE COST OF THE SYSTEM I ADVOCATE WOULD BE BORNE BY THE GENERATORS OF THE HAZARDOUS WASTES OR MATERIALS, WHICH NOT ONLY SUBSCRIBES TO THE THEORY OF THE POLLUTER PAYS, AS IN THE

SUPERFUND LAW, BUT ALSO WOULD BE LESS EXPENSIVE THAN THOSE INTERNAL COSTS NOW INCURRED BY BUSINESSES IN COMPLYING WITH GOVERNMENT REGULATIONS, ACCORDING TO ALL CURRENTLY AVAILABLE INFORMATION.

MY LEGISLATION, WHICH WILL BE DISCUSSED AT THIS HEARING BY EXPERTS WHO HAVE BEEN INVOLVED IN ALL ASPECTS OF THIS ISSUE, ADDRESSES THE VERY PROBLEMS WE ARE FACING AS A RESULT OF A LACK OF CONTROL OVER THE 500,000 SHIPMENTS A DAY. WE ARE COUNTING ON LADY LUCK TO GET US THROUGH MISHAPS THAT HAVE THE POTENTIAL OF BEING ANOTHER BOPHAL. FORTUNATELY, WE HAVE BEEN LUCKY; BUT, WHEN WILL OUR LUCK RUN OUT? WHO WILL OUR CONSTITUENTS BLAME WHEN AN ACCIDENT OCCURS THAT POLLUTES A DRINKING WATER SUPPLY OR WORSE YET, CAUSES DEATH?

I CAN ONLY HOPE THAT THIS SUBCOMMITTEE WILL ACT TO FULLY IMPLEMENT THE 1974 LAW AND OFFER TO THE PEOPLE OF THIS COUNTRY THE PROTECTION THEY DESERVE.

AGAIN, MR. CHAIRMAN, THANK YOU. I LOOK FORWARD TO WORKING WITH YOU IN ENACTING AN EFFECTIVE REAUTHORIZATION BILL WHICH WILL BRING OUR ARCHAIC HAZARDOUS MATERIALS TRANSPORTATION SYSTEM INTO THE 20TH CENTURY.

Mr. **Anderson**. Our next witness is the Hon. Dean Gallo, a Member of the Congress from New Jersey.

Dean, we do have your prepared statement, and it will be made a matter of the record in its entirety.

You may present it any way you wish.

TESTIMONY OF HON. DEAN GALLO, A U.S. REPRESENTATIVE IN CONGRESS FROM NEW JERSEY

Mr. **Gallo**. Thank you, Mr. Chairman.

I thank you, as my colleague has thanked you, for having hearings on a very important and serious situation dealing with hazardous materials.

I also want to compliment my colleague Mr. Applegate for his work in this area.

There are a number of bills that we are going to consider on this subject, and each, I guess, has its own approach.

Every year, more than 1.5 billion tons of hazardous material are transported across the United States. As a member of this subcommittee, we need to make sure that these materials are transported safely.

Mr. Chairman, the current system of regulating and transportating of these materials is inadequate. While most of the elements needed for an effective safety program are in place, we have not coordinated these efforts in a way that effectively protects the public health and safety.

At least 12 Federal agencies share responsibility for safe transport, yet in most instances, they do not share a common database or coordinate their activities. The list includes the Department of Transportation, the Federal Highway Administration, the Federal Railroad Administration, the Federal Aviation Administration, the National Highway Traffic Safety Administration, the Coast Guard, the Nuclear Regulatory Commission, the Environmental Protection Agency, the Occupational Safety and Health Administration, the Department of Energy, the Department of Defense, and the Federal Emergency Management Agency.

The list goes on.

The Office of Technology Assessment report concludes that State and local officials have great difficulty acquiring the basic information needed to plan and react to emergencies. Federal data is often incomplete or not provided in a helpful format.

My bill, H.R. 4153, which has bipartisan support, is a first step in getting our house in order. It calls for a regional examination of hazardous materials transportation issues so that we will have better commodity flow and accident data.

To ensure the safe transportation of these materials, we must have accurate records describing where, how, when and in what quantities these materials are transported.

We need this information so that we can, number one, target enforcement efforts.

Two, determine whether specific routes should be designated for the transportation of hazardous materials.

Three, help emergency response personnel by identifying accident hot spots.

Four, improve the fragmented Federal regulatory system.

Mr. Chairman, I want to again thank you for holding these important hearings. A copy of my full testimony has been submitted for the record and is available for the public.

At this time, I'd be glad to answer any questions.

Mr. **Anderson**. Thank you, Dean.

I agree with you that better coordination of the safety efforts should be required, and that public and private sector cooperation is essential to an effective program.

My question is, do you think that we should legislatively mandate that the Federal agencies better coordinate their programs?

Mr. **Gallo**. Well, I think that the bill itself gives the Department of Transportation a great deal of latitude. And I believe that the DOT should lead this coordinated effort.

Right now, clearly, we need to coordinate these commodity flow and accident reporting systems.

According to the OTA as much as 50 percent of the incidents that do occur are not reported. So I think that we have to get our act together and coordinate these agencies and increase enforcement. I think better coordination will go a long way in, number one, telling us where those hot spots are, whether or not there should be designated routes for hazardous material transportation, and last but not least to giving the emergency teams the necessary information at the time when they need it most.

Mr. **Anderson**. Well now, with respect to commodity flow data, would you care to comment upon the advisability of requiring shippers and carriers to participate in electronic data collecting systems?

Mr. **Gallo**. Well, I think that it may be important that shippers of dangerous hazardous materials will be able to notify the appropriate agency about certain highly dangerous shipments.

Having 14 different areas to report to and oversee this process does not make any sense to me. I think it is a responsibility for shippers and carriers to have accurate information pertaining to the type of load that they are carrying, so that when and if an emergency does occur, emergency responders will have the right information.

This will make sure that emergency squads, have the right information at the right time. It's similar to a piece of legislation that I worked on with Bob Wise on the superfund, which is community right-to-know provisions.

Mr. **Anderson**. Mr. Shuster?

Mr. **Shuster**. Thank you, Mr. Chairman.

I'm intrigued why your emphasis is on a regional study, Congressman Gallo.

Mr. **Gallo**. Well, let me say that first of all, it's been suggested by OTA that that is really the most realistic way of handling it.

The problems are not State by State, they're regional in nature, and therefore I think there has to be coordination, this will bring about an overall plan that makes a lot more sense than fractionalizing it through the States and from department to department.

Thank you.

Mr. **Anderson**. Mr. Mineta?

Mr. **Mineta**. Thank you very much, Mr. Chairman.

First of all, let me just compliment our colleague from New Jersey. Being a two-term member as you are, you really have gotten into a lot of the activities of our Public Works and Transportation committee, and I heartily congratulate you for that.

I was wondering in terms of the fragmentation—have you brought a focus as to given the fact that the Department of Transportation is designated as the lead agency, that doesn't really seem to be pulling things together. Do you think that they ought to continue to be the lead agency? If you say it's on a regional basis, does that mean then that there would be nine regional plans, nine regional approaches?

How do we make sure that it's not like the FAA where you have nine FAA's in many instances?

Mr. GALLO. Let me say to my colleague, Mr. Mineta, first of all, I believe that the lead agency should be the DOT—I was absolutely amazed when we started looking into this matter and saw how many agencies have a part of the responsibility in regulating hazardous materials transportation.

I think that DOT, should be the lead agency to pull this all together so that you have a central agency able to disseminate this information in a prompt manner.

I have not gone that far in the bill, because this is something that I want studied, and I'd like the Department of Transportation's recommendations before making specific proposals mandating this approval.

But I would hope that DOT would take the lead on this. Certainly most of the responsibility does fall within their realm.

Mr. MINETA. Well, again I'd like to compliment our colleagues from New Jersey for the work that he's done on this.

Thank you very much.

Mr. ANDERSON. Mr. Clinger?

Mr. CLINGER. Thank you, Mr. Chairman.

I too would commend our colleague for your very strong leadership in this whole area.

I wondered if you might elaborate just a little bit on how the study would be conducted? What would be the mechanics of the study?

Mr. GALLO. Well, first of all, most of the information is available. It's being reported to those 12 or 14 departments and agencies that are directly involved.

I would think that it should be comparatively easy to pull that information together and set up a central indexing and computerized system that would work. I'm not talking about spending an awful lot of money. I'm talking about some common sense in getting these agencies to work out a common system. The central agency could then disseminate this information to the other agencies that have a responsibility.

I think that this makes a great deal of common sense, and I was really surprised that this had not already been done—it has not.

So that's what's before us.

Thank you.

Mr. ANDERSON. Mr. Shuster, you had a question that you wanted to ask?

Mr. **Shuster**. I simply think that we should get into the record what the facts are with regard to trends.

The annual report has materials—the Department of Transportation shows that between 1980 and 1986, the overall incidents have dropped from 15,700 to 5,700—about a two-thirds decline in incidents.

In every mode, there's been a very substantial decline. In rail, it's from 1,272 down to 852, and in water, from 34 down to 7. Highways it's from 14,100 down to 4,600.

This evidence suggests that there has been a dramatic improvement in the reduction of hazardous material incidents.

I think that as we focus on the problem, we should see it in that context.

Thank you.

Mr. **Anderson**. Mr. Applegate?

Mr. **Applegate**. Thank you, Mr. Chairman.

I'd like to compliment you on taking a leadership role in the direction of this, because it is a very serious situation.

In looking at your bill, I think what you're trying to do is very good. I'm just wondering about the conducting of analyses of hazardous materials and the flow of hazardous materials on highways, waterways and railroads.

How much accessibility will you have to the information that you'll need, or that you think they will need? I think that now it's very difficult to be able to get information on these shipments, and one of the things in my bill that I attempt to do is this. Once we get on line with my legislation, and they begin manifesting, within 30 days we could have the information available, and could really implement what it is that you want to do.

Mr. **Gallo**. I appreciate your comments.

As I indicated early on, proposed legislation is really a first step. We need more information.

But there are difficult problems in dealing with the designated routes issue. When the responsibility is at the State level, rather than on the Federal level, you can imagine some of the difficulties and conflicts that arise. New Jersey has had several problems with New York route designations in this regard.

I think that it may be important to know when and where shipments are taking place. This information may help us to set designated hazardous materials routes.

Mr. **Applegate**. Yes.

Thank you very much.

Again I would commend you for your work in this direction.

Mr. **Gallo**. Thank you.

Mr. **Anderson**. Mr. Packard?

Mr. **Packard**. Thank you, Mr. Chairman.

I have no questions, but I want to commend both Mr. Applegate and Mr. Gallo for their work.

Mr. **Anderson**. Mr. Grant?

Mr. **Grant**. Thank you, Mr. Chairman.

Just one question. Are intrastate shipments covered under your bill?

Mr. **Gallo**. I'm sorry?

Mr. Grant. Intrastate shipments—are they covered under the provisions of your bill?

Mr. Gallo. I don't believe so.

It's dealing on a regional basis.

Mr. Grant. Are they covered under Mr. Applegate's bill—those intrastate shipments?

Mr. Applegate. Well, if I may, Mr. Grant—yes.

Ours would deal with that—but just like any other Federal law, we would set minimum standards, and the States would have to meet at least those standards.

Is that what it is that you're asking?

Mr. Grant. I know that, for example, in my home State of Florida, there's a considerable amount of interstate shipments, and now of course under these new requirements, we're required to have a hazardous waste disposal site in the State. There are to my knowledge no standards in place now, nor are there any envisioned.

I wondered if there is any provision which would allow for a cut off in funding, if the State of Florida doesn't provide for some kind of safety standards for intrastate shipment of these materials.

I'm a little concerned about it, because the site that's been selected is in my Congressional district.

Mr. Gallo. Mr. Grant, I can answer for the State of New Jersey—when dealing with intrastate hazardous material shipments—there is a requirement, what we call cradle-to-grave manifests that are required to be presented at highway checkpoints. And if they don't have that, they're in violation of State law. There are serious penalties that apply not only to the driver and the owner, but, if it's a corporation, to the corporate individuals. The corporate shield has been taken down in the State of New Jersey.

Mr. Grant. Your State has taken the initiative to do that?

Mr. Gallo. Yes, it has.

Mr. Grant. But there is no provision in your bill to require it otherwise?

Mr. Gallo. No, there is not.

Mr. Grant. Thank you.

Mr. Gallo. You're welcome.

Mr. Applegate. I might add, if you would, Mr. Chairman——

Mr. Anderson. Mr. Applegate?

Mr. Applegate. I'd say that whether it's intra or inter, all of the shipments would be manifested by the generator.

So that whether it's inside or crossing borders is the same.

Mr. Anderson. Mr. Hastert?

Mr. Hastert. Thank you, Mr. Chairman.

I just want to compliment both sponsors for addressing this issue.

Coming from a district in Northern Illinois where we have both low-level nuclear waste and high-level nuclear waste being transported and stored, it's something that's of immediate interest to me.

The commerce of our area depends on the availability for those commodities to be transported from one spot to another safely. I know that our State Police and other organizations are working together, and that there's a great deal of merit in looking at what those manifests are.

But we also need to have a study to see what we're doing and how different States deal with the problems before we try to put the long arm of the Federal Government on top of maybe some very good programs that are already in place.

So thank you, and I appreciate both sponsors for bringing this to our attention.

Mr. **Anderson**. Thank you.

Mr. Rowland?

Mr. **Rowland**. No questions, Mr. Chairman.

Mr. **Anderson**. Ms. Slaughter?

Ms. **Slaughter**. Just a comment as a co-sponsor of your bill, Mr. Gallo. Please do it. I think that New Jersey and New York have a good working relationship. Our State also has the intrastate regulations.

We realize the importance in areas as populous as ours to have interstate cooperation as well. I certainly encourage it.

Mr. **Anderson**. Thank you.

Thank you, Mr. Gallo, for an excellent presentation.

[Mr. Gallo's prepared statement follows:]

Testimony of Congressman Dean Gallo
Before the Public Works and Transportation
Subcommittee on Surface Transportation

Hearings Concerning The Transportation
of Hazardous Materials

May 19, 1988

Good Morning Mr. Chairman.

I want to take this opportunity to thank you and the other members of the Surface Transportation Subcommittee for holding hearings on the issue of Hazardous Materials Transportation.

Every year more than 1.5 billion tons of potentially hazardous materials, including gasoline, dangerous chemicals, hazardous waste and explosives, are transported across the United States. As members of this Subcommittee, it is our obligation to make sure that these materials are transported safely.

Mr. Chairman, in my opinion our current system of regulating the transportation of these dangerous materials is very fragmented and could eventually lead to disaster. It is a tragedy waiting to happen.

Within minutes, a routine traffic accident or train derailment can escalate into a major emergency requiring evacuation when hazardous materials are involved. To make such decisions, highly specialized information must be available to the nation's more than 40,000 local emergency response teams at a moment's notice.

Yet, a recent review by the federal Office of Technology Assessment has found a fragmented and overlapping federal response that fails to meet this critical need for timely information.

The OTA findings can be summarized in one sentence: Too many cooks spoil the broth.

The OTA concludes that the current federal system is "burdensome to industry without providing adequately for public health and safety."

Each day, millions of tons of hazardous materials are transported by road, rail and waterway in the United States.

In spite of Congress' best efforts since 1974 to address the problem of emergency notification in cases of accidents involving these materials, fire and emergency crews across the country are still not always receiving the right information.

In addition, efforts to effectively monitor these shipments to determine not only the types of materials being transported, but also the routes most often used, have not provided the specific information needed by emergency services personnel.

Our national standards for interstate shipments of hazardous materials should be redesigned to provide the most effective method of monitoring and reporting accidents involving these substances.

For these reasons, I have introduced the Hazardous Materials Transportation Information Act, H.R. 4153, which calls for a regional examination of hazardous materials transportation issues, so that we will have better commodity flow and accident data.

We need this information so that we can target enforcement efforts, determine whether specific routes should be designated for the transportation of hazardous materials, help emergency response personnel by identifying hazardous materials accident "hot spots," and improve the current fragmented federal regulatory system.

This bill is consistent with my Community Right-To-Know legislation, which is now law as a part of the Superfund, and of my support for other right-to-know legislation in the 100th Congress.

Several recent developments have caused concern among those of us in Congress who monitor the effectiveness of the Hazardous Materials Transportation Act of 1974.

My first concern is with the volume of material being moved and the great diversity of substances that are transported on our highways, railroads and waterways.

To ensure the safe transportation of these hazardous materials, we must have accurate records describing where, how, when and in what quantities these materials are transported. In many cases, this information is available, but it is not kept in a way that is easily accessible by those individuals who need it the most.

Also, since the transportation of hazardous materials is largely a regional phenomenon, H.R. 4153 requires the Department of Transportation to conduct a regional flow study. This approach is supported by the OTA conclusion that "annual DOT summaries of aggregate regional shipments could provide useful regional and State commodity flow data."

My second concern is that we do not know with certainty how many accidents involving hazardous materials occur each year, because reporting procedures are not always followed.

According to one estimate, 50% of the most serious accidents involving these materials go unreported.

Regardless of the number of accidents, however, the consequences of even one such accident can be so great, that we cannot afford to send our emergency services personnel into such situations with uncertainty in their minds as to the right response.

One of our challenges is to improve the reporting system without creating unnecessary regulations or paperwork, but we need to know more concerning the way information is now reported in order to do that effectively.

I believe that public and private sector cooperation is essential to the creation of an efficient national program.

My third concern is that most of the elements needed for an effective safety program are currently in place, but we have not coordinated these efforts in a way that effectively protects the public health and safety.

At least twelve federal agencies and a number of private emergency response services share responsibilities for safe transport, but they do not share a common data base or communication system.

The U.S. Department of Transportation is the lead agency for establishing and enforcing regulations regarding safe transportation of hazardous materials, through its Research and Special Programs Administration (RSPA). But, the RSPA shares enforcement or other responsibilities with the Federal Highway Administration, the Federal Railroad Administration, the Federal

Aviation Administration, the National Highway Traffic Safety Administration, the Coast Guard, the Nuclear Regulatory Commission, the Environmental Protection Agency, the Occupational Safety and Health Administration, the Department of Energy, the Department of Defense and the Federal Emergency Management Agency.

Under current law, these federal agencies have the power to develop regulations that either conflict with or duplicate existing federal requirements.

As a member of the Public Works and Transportation Committee, I believe we need to understand the workings of this patchwork national network of transportation safety efforts before we can tackle the important question of how to improve coordination.

An improved emergency response and reporting system are clearly needed to ensure safety.

The Office of Technology Assessment recently found that federal, state and local regulations often differ and sometimes conflict. This duplication often requires shippers to pay four or five different registration fees and carry an equal number of permits to complete one shipment through several states.

Duplication of this type is not merely an annoyance, it is another example of the fragmentation of vital information gathering that prevents emergency service personnel from doing their jobs effectively.

The OTA also finds that state and local officials have great difficulty acquiring the basic information on hazardous materials transportation that they need to plan and prepare for emergencies, because available federal data is incomplete or not provided in a helpful format.

The message of these findings is clear. Better coordination of existing programs will allow us to use safety funds more effectively.

As taxpayers and travelers will agree, money wisely spent on safety will pay dividends many times over.

#########

Mr. **ANDERSON**. Our next witness is Edith B. Page, Senior Analyst, Office of Technology Assessment of Washington, D.C., and she'll be accompanied by Nancy Naismith, Program Manager, Science Education and Technology, for the Office of Technology Assessment.

Ms. Page, we do have your prepared statement. It will be made a matter of the record in its entirety.

The floor is yours.

TESTIMONY OF EDITH PAGE, SENIOR ANALYST, OFFICE OF TECHNOLOGY ASSESSMENT, WASHINGTON, DC, ACCOMPANIED BY NANCY NAISMITH, PROGRAM MANAGER, SCIENCE, EDUCATION AND TECHNOLOGY, OFFICE OF TECHNOLOGY ASSESSMENT

Ms. **PAGE**. Thank you, Mr. Chairman.

Good morning.

It's a pleasure to report to the subcommittee this morning on events since the release in July of 1986 of OTA's report on the transportation of hazardous materials.

The report reviewed a spectrum of issues including data and information, containers, and training for emergency response. OTA's findings are by now widely known, I believe, and many of the bills under consideration address issues raised in the report.

Three major policy options suggested in it are a uniform truck driver's license, community emergency planning, and community right-to-know. These were addressed by legislation at the end of the 99th Congress, in October of 1986.

The effects of this legislation have changed substantially the way many communities approach and manage the transportation of hazardous materials.

This morning, I will describe these changes and review the major unresolved issues.

OTA estimated in 1986 that 75 percent of the Nation's emergency response personnel needed special training, and that development of a National strategy to provide training was a major need.

Such a strategy has three vital components—training guidelines, adequate funding, and appropriate information.

Thanks to a high level of public concern leading to Title Three of the superfund reauthorization legislation, two of these are already being addressed.

The National Response Team and the National Fire Protection Association are working to develop training standards for hazardous materials response. Within a relatively short time, such standards will be an accomplished fact.

In addition, DOT and FEMA have established an electronic bulletin board that can be accessed from all jurisdictions by computers giving information on resources and available training courses.

The National Firefighters Association, using money made available under Title Three, is developing a core curriculum for emergency response training. This curriculum includes videotapes and written training materials.

However, the third element—adequate funding—remains a major stumbling block. While many States and localities have made commitments to train more of their personnel, a comprehensive method of providing assistance has not yet been put in place.

Recognizing that many training programs are available, some groups have called for yet another assessment of training needs. OTA believes that an additional study at this time would not uncover anything new.

The need for assistance, particularly for small rural communities to fund training, is still there. Several of the bills before the committee recognize this.

However, in view of the programs available, if Congress chooses to provide additional Federal funding for emergency response training, a modest additional Federal program of $5 million to $7 million could supplement the State and local money that is already available.

Human failure and lack of information and planning, rather than equipment failure, cause most accidents. Indeed, over 60 percent of reported vehicle accidents and hazardous material spills are caused by human error.

In two areas, exemptions to existing or proposed standards related to human error are cause for concern. The first is the commercial zone exemption. State enforcement records show a large number of drivers and vehicles that do not meet Federal requirements in the commercial zones. Congress may wish to consider eliminating the commercial zone exemption for all safety requirements.

The second is that several groups have requested exemptions from the commercial drivers' license requirements. A truck accident can occur anywhere, and to anyone. The single most important control factor for that vehicle is the driver.

OTA's report supported the commercial vehicle driver's license, and we do not find any exemptions warranted.

Many State and local jurisdictions do not feel that Federal regulations require adequate safety precautions, and have passed additional regulations, creating a regulatory patchwork. This is particularly true in the areas of routing and permitting.

This particular problem, Mr. Chairman, and ladies and gentlemen, has not improved over the past two years. DOT's proposed permitting program for substances toxic by inhalation, for explosives and for highly radioactive materials would help ensure that carriers of these particular substances meet rigorous standards.

While the permitting program doesn't include all hazardous materials, perhaps once it is in place, State and local authorities could turn their attention to other aspects of hazardous materials transportation in which they have greater expertise.

Stepped-up Federal technical assistance to States and local jurisdictions considering routing restrictions and other regulations could ensure that decisions take into account the impact on neighboring jurisdictions.

Shipments of hazardous materials criss-cross the Nation, and every community needs to be aware of risks. Information about the transportation of hazardous materials, including shipments of spent fuel, is essential for emergency planning and preparedness.

It is in this area that the biggest change has occurred since OTA's report was issued. Title Three requires that information about hazardous materials manufactured or stored within a community be made available to an appropriate official. This amount of information encompasses most of the hazardous materials which will be transported within any jurisdiction's boundaries.

Some States have chosen to take a low-key approach to another Title Three requirement for developing State and community emergency response plans. However, many others have been galvanized into action by these two legislative requirements, and I have heard from several State and local officials that the changes that have occurred have brought about the most profound change in the approach to hazardous materials in decades.

Fire chiefs and other local officials have been inundated with descriptions of the hazardous materials that are a part of their community, and for the time being, they have as much information as they can handle. At last, they can plan for the purchase of equipment, do the appropriate training, locate response facilities, and assign personnel with a better understanding of the substances with which they may be confronted.

Once their plans, based on this information, are in place, and officials are prepared for the next step, a variety of new satellite tracking and computer programs and technologies are now available to provide more timely information if it is desired.

Mr. Chairman, it's a tribute to Congress, DOT, and a concerned public, I believe, that some of the problems identified several years ago are being addressed. I hope that the time is right to move ahead and meet the remaining challenges. Funding for emergency response and greater regulatory consistency are particularly important.

OTA is pleased to have pinpointed for Congress some major concerns, and stands ready to assist further as necessary and appropriate.

Ms. Naismith has some comments that she'd like to make, and then I'd be happy to answer any questions.

Ms. **NAISMITH**. Thank you, Mr. Chairman.

If I might just respond and clarify a point for the committee and for Mr. Applegate.

We did receive last week a request from Mr. Applegate to supply documentation on OTA's 1986 conclusions regarding on-line electronic systems.

I regret that we have not been able to provide that information prior to today. We received a similar request from Mr. Applegate a year ago, and provided information, which obviously was not adequate.

I want to be certain that this reply gives Mr. Applegate all the information he needs to clarify the basis of our conclusions.

I also wanted Ms. Page to be available to prepare for this hearing.

We are in the final stages of preparing the documentation, and I would hope that we could transmit it to you tomorrow. I hope that it will provide a better answer to your questions, and we certainly would be happy to supply that information to the committee, or to anyone else.

Mr. **ANDERSON**. Ms. Page, in the Office of Technology Assessment report, four policy issues were set forth for Congressional consideration. One was training and retraining of emergency responders in the public sector.

The report, on page ten, concludes that $15 million to $20 million annually would be needed just to train and retrain approximately 10 percent to 15 percent of the public respondents.

The report was submitted two years ago. Do you think that any revision needs to be made in the amount of money needed for training?

Ms. **PAGE**. Inflation, I assume, has hit training the way it has hit everything else, Mr. Chairman.

However, since that time, a number of courses have been developed. Some of the material is provided free of charge by industry. I think it would be helpful to keep the Federal input relatively modest, and while we haven't done a detailed financial examination, I would still say that amount probably would be a good starting point.

Mr. **ANDERSON**. One criticism frequently heard is that more coordination is needed between the various levels of Government and public and private entities. Is there any recent evidence of coordination efforts being made by the various groups?

Ms. **PAGE**. There are a few good signs, and there are some signs that aren't so good.

The Motor Carrier Safety Assistance program, which has been actively involved in training enforcement officers for hazardous materials enforcement, has come together considerably in the past two years, and the training has been expanded.

This does involve State groups and State officials with the Federal officials who run the program. That's the good news.

The bad news is that on routing decisions, we continue to have some very contentious problems. That is an unresolved issue that needs to be worked on.

Mr. **ANDERSON**. Title Three of Superfund will provide a database for on-site locations of hazardous materials and for developing emergency response plans. Now, will that strategy help in responding to accidents involving the transportation of those commodities?

Ms. **PAGE**. I think it will help tremendously. The answer is yes. Unequivocally.

In our research, we determined that the very first place that was necessary for local officials to go to begin gathering the information about transportation accidents that they might confront was to the facilities in their communities. Most of the transportation of the substances is relatively local.

Mr. Gallo pointed out in his testimony that transportation is regional. The average trip for a gasoline truck is 29 miles. The average trip for even a chemical truck is 235 miles. Carriers are bringing commodities to or from manufacturing facilities in a jurisdiction.

So, if you know what is stored or manufactured in your community, you're going to know, we estimate, about 90 to 95 percent of the types of substances that you would be confronted with in a transportation accident.

Mr. **ANDERSON**. In your dealings with carriers, shippers and Government authorities, have you been able to discern any preference for a funding mechanism for training emergency responders?

Ms. **Page**. Wherever it's available. [Laughter.]

The answer is——

Mr. **Anderson**. Well, were you thinking of a user side approach? How were you thinking?

Ms. **Page**. Well, my answer sounded facetious, but that's the preference that the local authorities have shown.

If there is Federal money available, they'll go after that first. When they feel that there are not other resources, they go to permitting or registration programs, which are a form of user fee.

Their approach really is wherever it's available, sir. They take whatever avenue makes that money available to them.

So no, there's no clear distinction.

Mr. **Anderson**. Mr. Shuster?

Mr. **Mineta**. Mr. Chairman—will the Chairman yield?

I wanted to follow—since this is a National issue in the sense of the exposure, shouldn't the consistency be on a National basis, even though it may be enforced by local agencies?

Ms. **Page**. Yes, sir.

Mr. **Mineta**. I think that's what we're trying to get at.

Ms. **Page**. Exactly.

Mr. **Mineta**. Otherwise, if you just leave it to the hodgepodge of local and State and county governments to deal with, we have no consistency at all.

Ms. **Page**. You're absolutely correct.

Mr. **Mineta**. So it seems to me that it has to be done at the top, and then if enforcement, training, etc. could be done at the local level, fine. Or maybe training has to be a Federal responsibility. But maybe the investigation and the enforcement of it at the local level would work.

Ms. **Page**. Mr. Mineta——

Mr. **Mineta**. I'm wearing my Mayor's hat. [Laughter.]

Ms. **Page**. I understand.

Mr. **Mineta**. From a prior life.

Ms. **Page**. I interpreted the Chairman's question to be whether I had been able to see a common thread in the sources currently used.

Mr. **Mineta**. All right. Fine.

Ms. **Page**. We certainly made a strong point in our report for the need for National consistency. It is extraordinarily difficult for the shippers and carriers to be faced with a new set of requirements every time they move.

Mr. **Mineta**. It seems to me that it does require some kind of National funding.

Ms. **Page**. Yes, I agree.

Mr. **Anderson**. Mr. Shuster?

Mr. **Shuster**. Thank you very much, Mr. Chairman.

I'm intrigued by the statistics that I quoted earlier that shows that there's been a two-thirds decline, roughly, in hazardous material incidents in the past 6 or 7 years.

Would you care to comment on that? Is that real, and do you see a continuation of that trend?

Ms. **Page**. No, it is not real, is the short answer.

We've found that through our research, DOT's figures really are not inclusive.

We found in many other databases a number of spills that were not recorded in DOT's database. That's number one.

Number two, DOT changed the reporting threshold during those years, so that there are a number of spills that you're seeing in those early years that aren't even required to be reported now.

The spill level has remained pretty constant, and it is roughly consistent with the amount of hazardous materials transported in any part of the country.

Mr. **Shuster**. So there's really been—if I understand you—neither much improvement nor further deterioration?

Ms. **Page**. That's right.

Mr. **Shuster**. It's about the same.

Ms. **Page**. That's right.

Mr. **Shuster**. And at what level are those numbers? Are they at the consistent level of the lower level that we see? At the higher level?

Ms. **Page**. They're consistent according to the density of the traffic. That's the interesting thing about it.

There are heavy corridors of transportation because of the kinds of facilities that exist in the different geographic regions of the country. Where there are heavier concentrations of transportation, you have more spills.

Now, they are not at an alarming level, but they are about the level of hazardous materials that are transported in any given part of the country. In some places that's five percent, there you would have five percent of the accidents involving a spill.

Mr. **Shuster**. What about the differences in severity? I presume that some spills are not really very significant, and others are enormously significant.

Ms. **Page**. That's right.

Mr. **Shuster**. How does that break out in terms of percentages?

Ms. **Page**. A great deal depends on the circumstances leading to the accident.

Generally speaking, the larger the amount of the substance involved, and the more highly toxic it is, the more severe the consequences.

Mr. **Shuster**. So a gasoline spill—I presume that gasoline spills are the most frequent.

Ms. **Page**. They are most frequent, and they cause the most deaths and damages. They cause more than all other hazardous materials put together, but you have to remember that they're about half of the total transported.

One thing that was interesting to us is that one State had a high number of hazardous material transportation accidents—and that's Pennsylvania. We don't know exactly why, but one possibility is that it's in a very heavily travelled corridor—east and west between two major manufacturing points. Because the road system is old, and in many cases there are tunnels on the interstate that require the trucks to go elsewhere——

Mr. **Shuster**. You're talking about the Pennsylvania Turnpike, I presume?

Ms. **Page**. Yes.

That's right.

Mr. **Shuster**. Do you mean that is where lots of accidents occur?

Ms. **Page**. All we have are the State totals, and Pennsylvania had more spills than any other State.

Mr. **Shuster**. That's interesting when you consider topography, and when you consider the road system.

Even the Turnpike, which is the granddaddy of them all, which was not really built to withstand that.

Ms. **Page**. That's right.

It was very interesting.

Mr. **Anderson**. Thank you.

Mr. Mineta?

Mr. **Mineta**. Thank you very much, Mr. Chairman.

First of all, just let me ask about this.

On page eight, when you're talking about containers, in your testimony you say that standards set by the NRC for spent fuel containers produce exceptionally durable containers if the standards are meticulously met.

Now, that to me is just a red flag.

Who does the inspection on—if I'm NYM Cask Manufacturers, and I'm sitting there gluing this stuff together, who inspects my shop to make sure that I am meeting these meticulous standards?

Ms. **Page**. I asked the same question of the NRC. I will tell you what they told me—and you might want to ask them.

Mr. **Mineta**. And I may not want to hear it. [Laughter.]

Ms. **Page**. Well, they told me that each manufacturing facility has a quality control assurance program——

Mr. **Mineta**. Each company?

Ms. **Page**. Yes.

Each, and that must be approved by the NRC.

I asked them what the quality assurance program consisted of.

At that time, they told me that it was basically a checklist. Each step had to be checked off and signed off by one or in some cases two officials.

Mr. **Mineta**. Of that company?

Ms. **Page**. Yes.

That's a fairly common practice, as you know, sir.

The manufacturers designate a representative—in aviation, that's the same.

Mr. **Mineta**. Yes, but they are certified by the FAA to do that.

Ms. **Page**. Well——

Mr. **Mineta**. And they're the designated engineering representatives at Boeing, for example—they are designated, and they are okayed at the Federal level to do that.

Now, is that also the case here? Are these people at the company level doing that certification also certified by NRC that they are qualified to do that?

Ms. **Page**. As individuals, I think so, but I'm not absolutely certain.

The company does however have to have the quality assurance plan approved by the NRC, and that would include designation of an individual position. Now, whether the individual——

Mr. **Mineta**. Well, there's a big difference between okaying a position and okaying a person.

Ms. **Page**. I agree.

We put that sentence in there, and worded it very carefully, sir, because we share your concern that this is an area where there is a potential for things to go wrong.

That was intended to be a red flag, or at least a pink one.

Mr. **Mineta**. And what kind of remedial or what kind of, I don't know, maybe our own quality assurance program that indeed this requirement is being met, do we have?

Ms. **Page**. We have the regular inspections by the Nuclear Regulatory Commission, and we have the on-file certifications, the quality assurance programs of each company.

That is the assurance.

Mr. **Mineta**. The certification?

Ms. **Page**. Yes.

Mr. **Mineta**. In terms of your looking at the total issue of transportation of hazardous materials—to what extent is training a big factor that isn't being addressed adequately? Or is it being addressed in a sufficient manner?

Ms. **Page**. Are you referring to training for emergency response or training for——

Mr. **Mineta**. Well, I think there are two parts to that.

One is the operator training and then the other is once an accident occurs, in terms of the training of the response team.

Let's go to the causal kind. What about the training in terms of the operators?

Ms. **Page**. We've visited a number of chemical companies and saw a variety of approaches. The chemical companies that did host us showed us the results of their training programs. The quality control that we saw there was good. The people knew what they were doing and how to handle it.

We know, however, that for more general handlers of commodities—I'm speaking of the carriers—that there is not very good training for the blocking and bracing, for the proper loading of the containers. This is a problem particularly with the tank trucks, which when partially loaded and going around the curve have the slosh of the liquid that tends to destroy the stability of the truck. There are a number of accidents that occur because of that.

We feel that there is a need for much more training for shippers and carriers.

Mr. **Mineta**. Okay.

Let's go to the other side, to the emergency response team side.

Ms. **Page**. Well, we identified that as the preeminent unmet need, because there are so many different types of emergency response personnel. They can be policemen, they can be emergency medical technicians. If those emergency medical technicians have not had appropriate training for hazardous substances, they become contaminated and may not know the proper way to clean up their uniforms and their equipment.

That is a tremendous need.

Mr. **Mineta**. Let me ask—in terms of that training component—is that like enforcement? Like our colleague Mr. Gallo pointed out, it's so fragmented? Is training with EPA, FEMA, DOT, whomever, like that?

Ms. **Page**. Yes, it is.

And each one of them trains to a different level and for different purposes.

Mr. MINETA. And is that a problem in and of itself, to have it fragmented in that manner?

Who does the coordination? Who is the lead agency that comes in terms of training and says, okay, this is your area of responsibility, DOT. EPA, this is your area of responsibility.

Ms. PAGE. There are memoranda of understanding between these agencies that ostensibly lay this out.

They say that DOT has the responsibility for training for enforcement.

Mr. MINETA. Yes, but who's ever heard of RSPA, or RPSA?

I don't even know the agency myself, other than I know there are four initials there. I'm not even sure that I have them in the right order.

Ms. PAGE. I became very well acquainted with them during this study. [Laughter.]

Mr. MINETA. But research and special programs administration, as I recall.

Ms. PAGE. That's right.

Mr. MINETA. Now, are they the lead agency to do that?

Ms. PAGE. Yes.

They have the lead for the enforcement training for the inspectors for the containers.

This is going to be not a pleasant story for you to hear, Mr. Mineta.

Each of the modal administrations retains responsibility for training their own inspectors.

This means that FRA trains its inspectors, and they inspect for hazardous materials on the railroads. The RSPA has hazardous materials inspectors also—sometimes they meet and overlap, but not frequently because there aren't very many of them.

The modal administration's retention of some of this hazardous materials responsibility—that is, on the road or on the rails—is a difficulty. It's just built into the way the legislation creating DOT and creating the Research and Special Programs Administration was created.

Mr. MINETA. Should there be regional response teams?

Ms. PAGE. EPA has regional response teams. They have four SWAT teams—as they call them—and then each of the EPA regions is supposed to have a somewhat middle level of response team.

They are not always as effective and as prompt as is to be hoped.

Mr. MINETA. Well, thank you.

I appreciate my colleague from Illinois yielding me his time. [Laughter.]

Mr. MINETA. And I will end at this point, Mr. Chairman.

But I would like to—Mr. Applegate is too much of a gentleman, but frankly, if I were sitting in his position, having asked you for over a year ago for a response and you haven't gotten to it yet, I'd be a little less understanding than Mr. Applegate is.

Ms. PAGE. Mr. Mineta, we responded. But apparently it was not adequate, as Mr. Applegate asked us again this year.

We did respond last year in May.

Mr. **Anderson**. Mr. Petri?

Mr. **Petri**. I'll be very brief, Mr. Chairman—I know that there's a vote on.

I too was very concerned about the lead agencies and how that was being correlated. Obviously there needs to be some improvement there, I think.

Just a side issue—your transportation of hazardous materials pamphlet. Just quickly perusing it, there's some misprinting in it that you might want to review. There are parts left out, misnumbering of pages, and so on.

The funding—I get the impression from your testimony that funding with $15 million to $25 million needed for basic training and then $5 million to $7 million for supplementing existing programs—am I receiving the implication that that will solve the problems?

Ms. **Page**. No.

It certainly will not solve the problems by itself.

It is basically a State and local issue, providing that training.

However, as Mr. Mineta said, safety in interstate commerce is a National responsibility, that safety in interstate commerce.

There are many programs in place, including some small Federal funding programs that are already there that can be used to assist in that.

We felt that an additional modest Federal effort would be appropriate to help.

Mr. **Petri**. And thus, you don't really feel that it's necessary to have the kinds of input money that's proposed in the legislation proposed?

Ms. **Page**. There were different amounts proposed in different bills.

One bill had a rather substantial amount—$80 million, I believe.

Mr. **Petri**. Yes.

Ms. **Page**. Our position would be that at the Federal level that is exceedingly generous.

Mr. **Petri**. Thank you very much.

Mr. **Anderson**. Mr. Applegate?

Mr. **Applegate**. Thank you very much, Mr. Chairman.

Ms. Page, and Ms. Naismith, getting back to Mr. Mineta's mentioning that he wouldn't be so understanding—well, I'm not very understanding about not getting a response. I might mention to Mr. Mineta that the response that we did get was not a written response, it was a response that was given to us when you came up to view a film in my office.

Is that correct?

Ms. **Naismith**. No, sir.

There is a written response. We wrote—I have the correspondence, and I'd be happy to refresh your staff's memory about this.

Mr. **Applegate**. Okay.

It was not an adequate response, in our opinion.

Let me say this—it gets down to this, and we don't have a lot of time here, but I'll just throw this out fast.

On page 34 of your transportation of hazardous materials summary, it just says that a real-time system is probably the only way to keep abreast of shipments. Then, of course, you say that on-line telephone access to information on all hazardous material shipments is neither feasible nor cost-effective.

We were just trying to find out some information with regard to those contradictory statements. It would seem to me that you would be able to provide us with that information much quicker since you made a statement. You feel that you have answered that in an adequate manner?

Ms. PAGE. Yes.

We have answered several letters over the past two years from your staff. We do have copies of them, and it might be helpful to you if we submitted them to you along with our answer to your new letter.

I don't view those two statements as inconsistent. They are statements about two different things. One is that there is virtually no other way to keep up with every single shipment because they change so frequently. Shippers and carriers don't know, often from one hour to the next, when a shipment of a given substance will be leaving.

Mr. APPLEGATE. Ah, but my bill will do that.

Ms. PAGE. Your bill will do that.

That's why we said that it's probably the only way to do it.

The second question is whether that would provide information that would be useful in the format that it was achieved. On that point the situation has changed since two years ago.

At that time, the communities did not have access to information about the materials stored and manufactured in their jurisdiction. Now they do. And that's why the testimony this year reads somewhat differently.

Once communities have made their plans based on those facilities inventories, and have encompassed in their plans an understanding of what is in those facilities, then they may wish to take the next step.

But frankly, what I am hearing from the fire chief and from the emergency response personnel is that they do not yet have their emergency plans up and in place, and they have not yet been able to accommodate into them all the information that they've been receiving about the storage facilities.

It might be appropriate sometime in the near future to take a look at a variety of systems. There are a number, and you'll be hearing about some more of them today.

Mr. APPLEGATE. Yes.

I'm sure of that.

I would assume that since you think that my bill does what is necessary to be done to provide you with the information, that you would support my bill. [Laughter.]

[Ms. Page's prepared statement and the summary of OTA's July 1986 Report on the Transportation of Hazardous Materials follow:]

THE TRANSPORTATION OF HAZARDOUS MATERIALS

STATEMENT OF EDITH B. PAGE
Project Director
Office of Technology Assessment
Congress of the United States

Testimony Before
Subcommittee on Surface Transportation
Committee on Public Works and Transportation
United States House of Representatives

May 19, 1988

STATEMENT OF EDITH B. PAGE

Good morning. It is a pleasure to report to this Subcommittee on events since release in July 1986 of the Office of Technology Assessment's (OTA) report on the Transportation of Hazardous Materials.

The report reviewed a spectrum of issues related to the transportation of hazardous materials, with specific attention to data and information systems, containers, and training for emergency response and enforcement. Four major policy issues were identified for congressional consideration: training, regulatory consistency, data and public information, and containers. OTA's findings are by now widely known, and many of the bills under consideration today address issues raised in the report. Three major policy options suggested in it — a national, uniform truck driver's license, community emergency planning, and community right-to-know — were addressed by legislation at the end of the 99th Congress in October 1986. The effects of this legislation have already changed substantially the ways many communities approach and manage the transportation of hazardous materials. This morning I will describe these changes and review the major unresolved policy and program issues to provide a context as the Subcommittee evaluates the bills before it and prepares for reauthorizing the Hazardous Materials Transportation Act (HMTA).

Training

Approximately 2 million State and local firefighters, police officers, and other emergency service personnel are potential first responders to hazardous materials transportation accidents. OTA estimated in 1986 that 75 percent of this total population had received no hazardous materials training or were in need of specialized training. A transportation spill can occur almost anywhere and anytime. This randomness makes assigning responsibility for spill response difficult, because police, firefighters, or other emergency personnel may reach the scene first and must deal with the emergency. Often different parts of local government are responsible for each of these groups, and the coordination that leads to the most effective response is very difficult to achieve.

At the Federal level, several agencies have training responsibilities. The Environmental Protection Agency's primary role is training for high level response to a fixed facility spill; the Coast Guard trains for response to serious spills in water, and the Federal Emergency Management Agency's authority comes from the Civil Defense Act, so training for hazardous materials emergencies has always taken a back seat. Because the Research and Special Programs Administration (RSPA), the Department of Transportation (DOT) agency charged with primary responsibility for carrying out provisions of the Hazardous Materials Transportation Act, has lead responsibility for transportation matters related to hazardous materials, some have looked to RSPA for assistance with emergency response training; yet RSPA's responsibilities are in the areas of regulation and enforcement.

OTA concluded in 1986 that development of a national strategy to provide training for an estimated 1.5 million State and local emergency response personnel was a major unmet need. Such a strategy has three essential components: training guidelines appropriate for different levels of response, adequate funding, particularly at the local level, and comprehensive information on existing resources. Thanks to a high level of public concern leading to Title III of the Superfund Reauthorization legislation, two of these components are already being actively addressed.

The National Response Team and the National Fire Protection Association, responsible for setting minimum professional standards for firefighters, are working to develop training standards for hazardous materials response. Within a relatively short time, such standards will be an accomplished fact. In addition, RSPA and FEMA have established an electronic bulletin board to provide information on resources and on available training courses. The National Firefighters Association, using monies made available under Title III, is developing a core curriculum for emergency response training, including videotapes and training materials.

However, the third element, adequate funding, remains a major stumbling block. While many States and localities have made commitments to train more of their personnel, a comprehensive method of providing assistance has not been put in place. Recognizing that many training programs are available, some groups have called for yet another assessment of training needs. OTA reviewed the assessments that were completed in 1986 and made its own estimates. OTA believes that an additional study at this time would not uncover anything new. The need for assistance, particularly for small communities, to fund training is still an issue; indeed, several of the bills before the Committee recognize the continued need and address the issue.

The total funding goal for basic first responder training could be between $15 and $25 million for both public and private sources (see attachment A). In view of the variety of programs available, if Congress chooses to provide additional Federal funding for emergency response training, an annual Federal program of $5 to $7 million could supplement existing Federal, State, private, and local expenditures. Possible Federal funding sources include general tax revenue, the fuel tax, or a special fund derived from a user fee levied on industry.

It should be noted that Title III of the 1986 reauthorization of the Superfund Act does designate $5 million for State and local emergency response planning and training. The money is to be passed through FEMA and used in part to support FEMA's technological hazards program; the remainder will go to the States. However, as the requirement for development of community response plans receives funding priority, insufficient funds will remain to have a noticeable impact on training needs.

In striking contrast to response training, training for hazardous materials enforcement is far better organized, largely because RSPA has had direct responsibility for this, and the need for better training was clearly shown a number of years ago. However, Federal budget constraints have reduced Federal enforcement below an effective level, and despite recent increases in inspector levels, trained inspector manpower continues to fall short of the need. The Motor Carrier Safety Assistance Program provides some essential funding and support for State motor vehicle enforcement and training programs. Especially useful are the programs to perform terminal and facility audits that a few States have undertaken. These provide vital assistance to Federal personnel. OTA finds that continued support is needed for both Federal and State enforcement training, and that more enforcement personnel are needed for all transportation modes.

OTA's research showed that human failure and lack of information and advance planning, rather than equipment failures, cause most accidents, injuries, or environmental damage. Indeed, over 60 percent of reported vehicle accidents and hazardous materials spills are caused by human error. Most current Federal programs do not directly address this major problem area.

In two areas, both linked to hazardous materials transportation, exemptions to existing or proposed DOT standards related to human error cause concern. The first is the commercial zone exemption for vehicles operated exclusively in urban commercial zones. While the specific requirements for hazardous materials must be met even in the commercial zone, State enforcement records show a disproportionately large number of drivers who do not meet Federal requirements and vehicles that are in poor condition in commercial zones. Congress may wish to consider ensuring that all safety requirements apply to the commercial zone. The second is that several groups, including farmers and firefighters, have requested exemptions from the commercial drivers' license requirement. A truck accident can occur anywhere and to anyone, and the single most important accident control mechanism is the driver. Permitting an individual who has not met the requirements for the commercial driver's license to handle a truck on the road will jeopardize the safety of the traveling public. OTA's report supported the commercial vehicle driver's license and did not find exemptions warranted for any heavy vehicle operator.

Finally, the development of mandatory training requirements for shippers, carriers, and freight forwarders could increase safety substantially. Such training could focus on procedures for loading and unloading, and fastening, blocking, and bracing hazardous materials containers.

Federal/State Regulations

Within DOT, enforcement responsibilities are now shared by five agencies. RSPA is the lead agency for establishing multimodal hazardous materials regulations, except for bulk marine shipments, which are regulated by the Coast Guard; the modal administrations — the Federal Highway Administration, the Federal Railroad Administration, the Federal Aviation Administration, and the U.S. Coast Guard — are responsible for safety regulations, including the development of hazardous materials regulations, applicable to each mode. OTA also finds that coordination within DOT and among other Federal agencies needs strengthening, especially as intermodal and international shipments increase.

Many State and local jurisdictions do not feel Federal regulations provide adequate safety, and have passed additional regulations. Such State and local registration programs, permit requirements, and routing and time of day restrictions create a regulatory patchwork that complicates enforcement and training and is burdensome to industry. This problem has not lessened over the past two years. A provision of H.R. 4069, the Administration bill, would begin to address one aspect, however. The proposed permitting program for substances toxic by inhalation, for explosives and for highly radioactive materials could assist DOT in ensuring that carriers of these very dangerous substances meet rigorous standards. States and localities could thus turn their attention to aspects of hazardous materials transportation in which they have greater expertise.

Greater consistency in Federal, State, and local regulations would improve enforcement and ease burdens on interstate commerce. Stepped up Federal technical assistance to States and local jurisdictions considering routing restrictions or other independent regulation of hazardous materials could ensure that decisions take into account the impacts on neighboring jurisdictions and provide a level of safety at least equivalent to Federal regulations.

Public Information

More than 60 percent of the hazardous materials transported each year move over the Nation's roadways, making public exposure to an accidental release from a truck much more likely than for rail, barge, or air (see attachment A). OTA's analysis shows that the largest number of hazardous materials shipments occurs in the Gulf Coast area, reflecting the major petrochemical plants located there. From Texas and Louisiana, shipments fan out, with major barge, rail, and truck routes up the Mississippi Valley to the Great Lakes area and rail and truck routes Northeast and Southeast to the Middle Atlantic and Southern Atlantic States. Southern California has an additional major concentration in the west. Generally speaking, greater numbers of hazardous materials spills are found in the most heavily traveled transportation corridors. However, shipments of hazardous materials are found everywhere in the country, ranging from gasoline to toxic pesticides and advanced industrial coatings. Thus, every community needs to be aware of the risks.

RSPA's efforts to coordinate DOT data collection and to ensure more complete spill reporting are beginning to pay off. Staff has been added and analysis stepped up, with the result that RSPA now has identified geographic areas of the country where substantial numbers of spills occur. This paves the way for targetting enforcement and developing more effective programs.

Extending Federal reporting requirements for hazardous materials releases to intrastate highway transportation would increase the accuracy and completeness of information on hazardous materials spills. RSPA has issued a notice of proposed rulemaking to do this. To enhance the effectiveness of the new requirement, RSPA must work with the States to develop common report forms for transportation related spills as part of routine traffic accident investigation. Such reports could provide a basis for data collection at the State level — a more comprehensive and accurate source than relying on reports to a national reporting center.

Enhanced data and information collection could enable DOT to complete a study of general transportation patterns for hazardous materials that would provide useful information for Congress and the public. In addition, a registration program for those engaged in the transportation of hazardous materials would provide DOT with essential information about the community it regulates. Several of the bills before the Committee suggest such programs.

Information about the transportation of hazardous materials, including shipments of spent nuclear fuel, is necessary for State and local emergency planning and preparedness. Knowledge of the extent and nature of hazardous materials manufacture and storage in the community is essential for accident prevention and response planning. It is in this area that the largest change has occurred in the past two years. Title III requires that information about the hazardous materials manufactured or stored within a community be made available to appropriate officials in every jurisdiction.

Some States have chosen to take a low key approach to another Title III requirement for developing State and community emergency response plans. Many others, however, have been galvanized into action by these two legislative requirements, which have created what has been termed the most profound change in approach to hazardous materials in decades. Fire chiefs and other local officials have been inundated with descriptions of the hazardous materials that are a part of their community. The information has silenced many complaints that officials don't know what the risks are in their communities; for the time being, they have more information than they can handle. At last, communities can plan for the purchase of equipment, choice of training, location of response facilities, and assignment of personnel with a better understanding of the substances with which they may be confronted. Moreover, once plans based on the information are in place and officials are prepared for the next step, a variety of new satellite tracking and computer technologies are now available to provide more timely information if desired.

On the other hand, State inspectors continue to find high violation rates for hazardous materials regulations. In addition, industry personnel told OTA that education of small shippers and carriers about hazardous materials transportation regulations occupied a major portion of their training efforts. An outreach information program aimed at such constituents could begin to reduce this high rate of violation, once a registration program is established that will identify the target community for RSPA.

OTA's research necessitated working closely with RSPA, whose staff was unfailingly cooperative and courteous. Moreover, as RSPA understood the strongest criticisms of its programs, it evaluated its activities, and has made a number of commendable changes, particularly in the area of data-collection and analysis.

Containers

In one special area, the regulatory process has so far worked well. The standards set by the Nuclear Regulatory Commission for spent fuel containers produce exceptionally durable containers if the standards are meticulously followed during cask manufacture and transportation. Under these conditions, the containers provide a much greater degree of public protection than that afforded in any other current hazardous material shipping activity.

Better Federal coordination in setting container regulations for other hazardous materials for rail, highway, water, and air is essential. DOT faces special challenges as it moves ahead with the rulemaking on performance standards for containers. Careful attention to adequate tracking of performance under some of the more rigorous conditions of transportation for containers approved under the new standards will be crucial. In addition, accident data raise serious questions about the safety of transportation for two types of containers — the stability of the tank trucks used to transport gasoline and the types of truck chassis that carry portable tanks suitable for transport by ship, rail, or truck. The agencies within the Department of Transportation should scrutinize the standards for each of these with great care.

It is a tribute to Congress, DOT and a concerned public that some of the problems identified several years ago are being so actively addressed. Let us hope that the time is ripe to move ahead and meet the remaining challenges, such as funding for emergency response and greater regulatory consistency between governmental levels. OTA is pleased to have participated in pinpointing for Congress some of the major concerns related to this essential commerce and stands ready to assist further as necessary and appropriate.

ATTACHMENT A

Calculations for Costs of Hazardous Materials Emergency Response Training for First Responders[a]

Target audience	First responders — firefighters, police, hospital emergency room staff, and ambulance drivers
Size of target audience	1.5 million (approximate)
Nature of training	Basic training covering identification of hazardous materials, the importance of self protection, protection of the public and environment, and the notification of authorities.
Duration of training	Modular training geared to appropriate target audiences would be developed and taught by trained instructors. Must provide opportunities for role playing and group problem solving and acquaint response personnel with the unique dangers of hazardous materials response.
Key cost components	Course development, handout materials/workbooks, instructional services, training personnel, travel, and equipment.
Estimated average cost per trainee	$100[b]
Estimated trainee completions per year:	150,000 to 225,000
Required funding	$15 to $22.5 million

[a] This type of training emphasizes the differences between hazardous materials response and firefighting. Training covers the dangers inherent in hazardous materials accidents, how to identify hazardous commodities, appropriate responses, and the application and use of protective equipment. Basic training is not designed to cover advanced hazardous materials response techniques or cleanup procedures.

[b] OTA estimates based on tuition for existing courses and interviews with officials and course instructors. Charges vary widely — one large and successful 2-day program is free, whereas another more comprehensive 3-day course charges tuition of $450.

Source: Office of Technology Assessment, 1986.

ATTACHMENT B

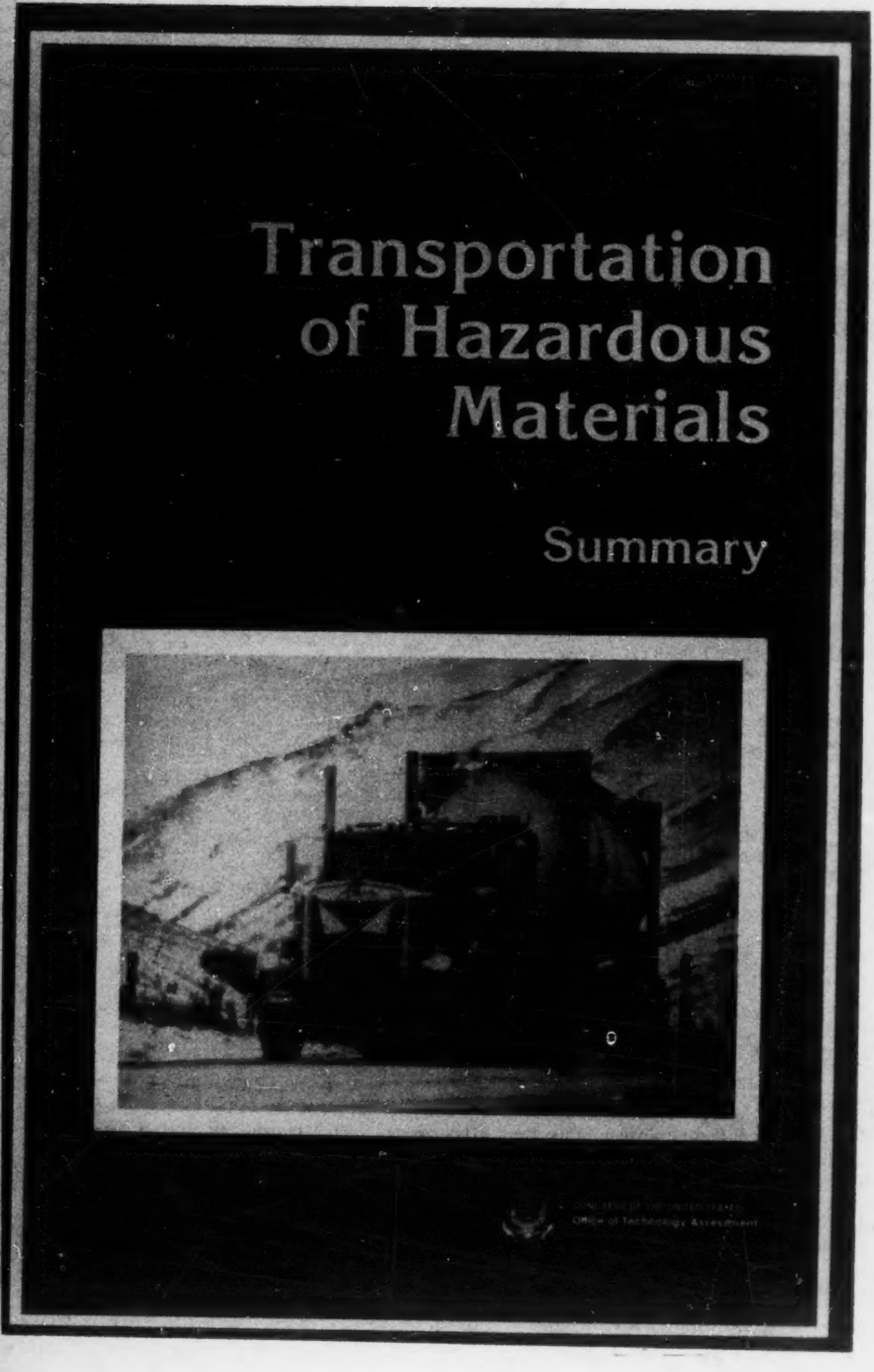
ESTIMATED TRANSPORTATION OF HAZARDOUS MATERIALS IN THE UNITED STATES BY MODE IN 1982

Mode	No. of Vehicles/Vessels Used for Hazardous Materials	Tons Transported	Ton Miles
Truck	337,000 dry freight or flat bed	927 million	93.6 billion
	130,000 cargo tanks		
Rail	115,600 tank cars	73 million	53 billion*
Waterborne	4,909 tanker barges	549 million	636.5 billion
Air	3,772 commercial planes	285 thousand	459 million
TOTAL		1.5 billion	784 billion

Source: OTA calculations based on Federal data augmented by other resources.

---

*1983 data; 1982 data was too filled with errors to allow calculations.



Transportation of Hazardous Materials

Summary

CONGRESS OF THE UNITED STATES
Office of Technology Assessment

Office of Technology Assessment

Congressional Board of the 99th Congress

TED STEVENS, *Alaska, Chairman*

MORRIS K. UDALL, *Arizona, Vice Chairman*

Senate

ORRIN G. HATCH
Utah

CHARLES McC. MATHIAS, JR.
Maryland

EDWARD M. KENNEDY
Massachusetts

ERNEST F. HOLLINGS
South Carolina

CLAIBORNE PELL
Rhode Island

House

GEORGE E. BROWN, JR.
California

JOHN D. DINGELL
Michigan

CLARENCE E. MILLER
Ohio

COOPER EVANS
Iowa

DON SUNDQUIST
Tennessee

JOHN H. GIBBONS
(Nonvoting)

Advisory Council

WILLIAM J. PERRY, *Chairman*
H&Q Technology Partners

DAVID S. POTTER, *Vice Chairman*
General Motors Corp. (Ret.)

EARL BEISTLINE
Consultant

CHARLES A. BOWSHER
General Accounting Office

CLAIRE T. DEDRICK
California Land Commission

JAMES C. FLETCHER
University of Pittsburgh

S. DAVID FREEMAN
Lower Colorado River Authority

JOSEPH E. ROSS
Congressional Research Service

MICHEL T. HALBOUTY
Michel T. Halbouty
Energy Co.

CARL N. HODGES
University of Arizona

RACHEL McCULLOCH
University of Wisconsin

LEWIS THOMAS
Memorial Sloan-Kettering
Cancer Center

Director

JOHN H. GIBBONS

The Technology Assessment Board approves the release of this report. The views expressed in this report are not necessarily those of the Board, OTA Advisory Council, or individual members thereof.

Foreword

Over 1½ billion tons of hazardous materials are transported annually in the United States. Most of these materials reach their destinations safely because it is in society's and industry's best interests to have them do so. We Americans take for granted the convenience of our transportation system and the amenities of modern life that the petroleum, chemical, and nuclear industries help make possible. Sometimes, however, an accident occurs, and a hazardous material is released, causing damage to the public and the environment. The occasional serious accident is both frightening and worrisome, while a disaster, such as the thousands of deaths and injuries in Bhopal, India, and the enormous release of radioactivity at Chernobyl, raises public apprehensions dramatically. Indeed, few activities with such statistically low risks as the transportation of hazardous materials arouse such intense public concern.

The Hazardous Materials Transportation Act, passed in 1975, is the primary Federal law governing this transportation. Largely unchanged in the past dozen years, the Act will be scrutinized carefully by Congress in the near future as it comes due for reauthorization. To determine whether major safety problems exist in the transportation of hazardous materials that should be addressed through legislation, and whether appropriate technologies exist that could improve this essential portion of our Nation's commerce, the Senate Committee on Science, Commerce, and Transportation requested the Office of Technology Assessment to undertake this study. Subsequently, the House Committee on Public Works; the Subcommittee on Commerce, Transportation, and Tourism of the House Committee on Energy and Commerce; and the Subcommittee on Government Activities and Transportation of the House Committee on Government Operations endorsed the study. OTA's report on *Transportation of Hazardous Materials* includes a comprehensive assessment of the regulations, information systems, container safety, and training for emergency response and enforcement for consideration by Congress as it deliberates on reauthorization of the Hazardous Materials Transportation Act.

The advisory panel, workshop participants, and contributors for this study played key roles in developing the major issues and contributed a broad and invaluable range of perspectives. OTA thanks them for their commitment of time and energy. Their participation does not necessarily represent endorsement of the contents of the report, for which OTA bears sole responsibility.

John H. Gibbons

JOHN H. GIBBONS
Director

Transportation of Hazardous Materials Advisory Panel

John W. Barnum, *Panel Chairman*
White & Case, Washington, DC

Garnet Bernhardt[1]
Supervisor, Colerain Township
Cincinnati, OH

Keith J. Bunting
Dow Chemical Co.
Midland, MI

Robert A. Christman
Mobay Chemical Corp.
Pittsburgh, PA

John Cooper
Illinois Department of Nuclear Safety
Springfield, IL

Richard E. Cunningham[2]
Nuclear Regulatory Commission
Silver Spring, MD

Ed Dietz[3]
Union Carbide Corp.
Charleston, WV

Senator Edward S. Ford
Commonwealth of Kentucky
Lexington, KY

Roger Kasperson
Clark University
Worcester, MA

Kevin Kenzenkovic[4]
Slater, MO

Charles N. Lovinski
Federal Express
Memphis, TN

Charles H. Mayer
Tri-State Motor Transit Co.
Joplin, MO

Warren Owen
Duke Power Co.
Charlotte, NC

Paul Remick, Jr.
Exxon USA
Houston, TX

Cathy Reynolds
Councilwoman-at-Large
City of Denver
Denver, Colorado

Alan I. Roberts[2]
U.S. Department of Transportation
Washington, DC

Raymond D. Scanlon
The Port Authority of New York and New Jersey
New York, NY

Bill R. Teer
Transnuclear, Inc.
White Plains, NY

A.D. Williams
Union Pacific Railroad
Omaha, NE

---

[1] During Advisory Panel tenure.
[2] *pro forma.*
[3] Retired December 1985.
[4] During Advisory Panel tenure. Currently City Administrator, City of Oak Ridge North, The Woodlands, TX.

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its content.

Transportation of Hazardous Materials
OTA Project Staff

John Andelin, *Assistant Director, OTA*
Science, Information, and Natural Resources Division

Nancy Carson Naismith
Science, Education, and Transportation Program Manager

Edith B. Page, *Project Director*

Eric Butler, *Analyst*

Ann Carroll, *Research Assistant*

Francine Rudoff, *Analyst*

R. James Arenz, *Senior Analyst*

Jonathan Atkin, *Research Assistant*

Lucia Turnbull, *Analyst*

Marsha Fenn, *Administrative Assistant*

Betty Jo Tatum, *Secretary*

Christopher Clary, *Secretary*

Gala Adams, *Clerical Assistant*

Contractors

Mark Abkowitz   Lawrence Bierlein   Julia Connally
Theodore Glickman   Nina Graybill   George List
Science Concepts, Inc.   Porter Wheeler

Transportation of Hazardous Materials

Hazardous materials are transported safely every hour of every day. Yet few activities with such statistically low risks arouse such intense public concern. Houston citizens did not remain calm when a speeding truck carrying an intermodal tank of highly flammable methyl methacrylate hit an exit ramp guardrail. The driver was killed. The tank broke open, its contents ignited, and the resulting inferno destroyed part of the freeway and dropped burning debris on the street below. Fortunately, no one else was hurt, and the Houston Fire Department already had a hazardous materials response team with the knowledge and equipment to handle the accident.[1] Denver residents were similarly stunned when a truckload of Navy torpedoes overturned one Sunday morning on a city freeway exit loop. No one was injured, but hours passed before experienced Federal assistance arrived. Worried State and local officials did not know whether the scattered weapons needed to be defused before cleanup could begin.

Although by now most Americans are aware that hazardous materials can wreak enormous health and environmental damage, we continue to take for granted both transportation and the amenities of modern life brought to us by the petroleum, nuclear, and chemical industries. Consequently, spectacular accidents, while relatively infrequent, remind us of the harm that can be done and underscore a demand that something be done to keep them from happening—or at least help us be prepared to handle them safely.

Over 1.5 billion tons of hazardous materials were transported by land, sea, and air in the United States in 1982.* (For a tonnage breakdown by mode, see table 1.) Truck transport, by a fleet of 467,000 trucks, accounts for more than half of all hazardous materials shipments, or about 927 million tons per year. Because this means a great many truck shipments, hazardous materials

---

[1] Jack Douglas and Dan Grothaus, "Trucker Dies in Fiery Crash," *The Houston Post*, July 31, 1985, p. 1A.

*Based on OTA calculations from data supplied by the U.S. Bureau of the Census and other sources. This does not include pipeline transportation, which would more than double the annual total.

Table 1.—Estimated Transportation of Hazardous Materials in the United States, by Mode in 1982

Mode	Number of vehicles/vessels used for hazardous materials	Tons transported	Ton-miles
Truck	337,000 dry freight or flat bed 130,000 cargo tanks	927 million	93.6 billion
Rail	115,600 tank cars	73 million	53 billion[a]
Waterborne	4,909 tanker barges	549 million	636.5 billion
Air	3,772 commercial planes	285 thousand	459 million
Total		1.5 billion	784 billion

[a] 1983 data; 1982 data had too many errors to allow calculations.

SOURCE: Office of Technology Assessment calculations based on Federal data augmented by other resources.

emergency response training is especially important for State and local public safety officers who are usually the first called to an accident.

The types of vehicles carrying hazardous materials on the Nation's highways range from cargo tank trucks to conventional tractor-trailers and flatbeds that carry large portable tank containers or nonbulk packages, such as cylinders, drums, and other small containers. Rail shipments are usually bulk commodities such as liquid or gaseous chemicals and fuels, carried in tank cars. Most hazardous materials transported by water are moved in bulk containers, such as tank ships or barges, while air shipments are typically small packages, often high-value or time-critical material.

People are most concerned about those risks that are involuntary, uncontrolled, unfamiliar, immediate, manmade, and potentially catastrophic.[2] Hazardous materials transportation possesses many and sometimes all of these attributes. Risk assessments can help to address two fundamental questions, one quantitative and objective and one qualitative and subjective:

- What is the level of risk?
- What levels of risk are acceptable to the parties concerned?

The first question is relatively readily addressed with adequate data and proper methodology, although two essential components must be documented—probability and consequence. The second question, however, involves numerous judgments and often a great deal of discussion and negotiation, especially when large numbers of people and several governmental jurisdictions are involved. It is the balance between the answers to these two questions that this report is all about. The Office of Technology Assessment (OTA) can address primarily the first question; decisions about the second fall in the province of public officials at every level of government and citizens across the country.

Public concerns expressed to Congress are rooted in the facts that the level of understanding about hazardous materials transportation in or near a jurisdiction is generally low, and that the technical experts, both industry and Federal regulators, are not trusted to provide complete information about the level of risk or to ensure safety. State and local governments, finding that Federal regulations have not prevented accidents in their cities, have passed legislation requiring permits and fees or restricting hours of travel for hazardous materials, in an effort to control what is perceived to be a substantial public risk. In addition, some large jurisdictions have formed special fire department hazardous materials teams to respond to accidents or spills. Some State and local government and industry groups have united to form a Hazardous Materials Coalition to lobby for greater Federal support for training.

Public apprehensions notwithstanding, most hazardous materials are transported safely to their destinations because:

- Industry—manufacturers, shippers, and carriers —is, for the most part, aware of the dangers of the products and its liability for the personal, property, and environmental damage and expense that an accident could cause and takes appropriate precautions.

---

[2] N.C. Rasmussen, "The Application of Probabilistic Risk Assessment Techniques to Energy Technologies," *Annual Review of Energy*, vol. 6, 1981, pp. 123-138.

- Hazardous materials transportation is heavily regulated by several governmental bodies.

The basic regulatory structure has been developed, largely by industry, over the last 100 years, and mostly before public awareness of the dangers of toxic substances and understanding of the complex measures necessary to protect public health and the environment reached their present levels. There have been no far-reaching regulatory reforms and no strategic changes to help the system cope with late 20th century technologies and public awareness. For instance, changes in container regulations have addressed individual container designs and specific situations, rather than recognizing that the interaction between container and carrying vehicle has an enormous impact on safety. Although long-established Federal regulations and industry care have helped to maintain the public safety, it is time to modernize our approach and address some of the very real shortcomings in the current system.

More often than not it is people problems (inadequately trained personnel, poor coordination and communication) or lack of information and advance planning, rather than technological shortcomings, that cause accidents, injuries, or environmental damage.* Yet, the roles of the many Federal agencies charged with meeting the complex problems are poorly coordinated and defined. Federal programs that provide technical assistance to State and local governments for emergency response enforcement, accident prevention, and planning activities are uncoordinated, and many find them insufficient and underfunded as well.

The Nation's 39,000 local governments know that their public safety officers will be first on the accident scene and are demanding assistance in being prepared.[3] Differing Federal, State, and local regulations mean that a highway transporter may need to pay four or five different registration fees and have an equal number of permits to complete one shipment through several States.[4] State and local officials find it difficult and sometimes impossible to acquire the basic information on hazardous materials production and transportation that they need to plan and prepare for emergencies.[5] Data available from the Federal Government is disparate, incomplete, and not helpful for these purposes. Moreover, the regulatory process for containers works against innovation in design, thus making the United States less competitive in the international market. In short, the system is burdensome to industry without providing adequately for public health and safety.

The cumbersome system has endured in part because Federal records imply that hazardous materials accident rates are low. However, OTA finds that Federal accident records suffer from significant underreporting and do not provide an accurate assessment of the level of safety in the transportation of hazardous materials. In any case, arguments over statistics are immaterial to the

---

*Sixty-two percent of reported hazardous materials spills are caused by human error.

[3] Paula N. Alford, National Association of Towns and Townships, "A National Hazardous Materials Emergency Response Fund," unpublished background paper, December 1985, p. 4.

[4] U.S. Congress, Office of Technology Assessment "Transcript of Proceedings—Workshop on State and Local Activities in the Transportation of Hazardous Materials," unpublished typescript, May 30, 1985.

[5] Ibid.

public safety person first at the scene of the accident. He is likely to be one of the Nation's 1 million largely untrained volunteer firefighters and may be confronted with a placarded, derailed railroad tank car spewing a mysterious cloud that burns his eyes.* Chances are his basic training has included suiting up, moving in, and spraying water or foam on such a car. He probably has not heard that the simplest equipment for dealing with a hazardous materials accident includes tennis shoes and binoculars—tennis shoes to run away and binoculars to read the hazardous materials placard from a distance before calling for expert help. He also will not know that State enforcement records show that between 25 and 50 percent of trucks are incorrectly placarded,[6] so if he must respond to a truck accident, accurate identification of the substance involved may be difficult and time-consuming.

Where does the local official look for help in training emergency response people? He could turn to one of four or five agencies in the U.S. Department of Transportation (DOT), the Federal Emergency Management Agency (FEMA), or the U.S. Environmental Protection Agency (EPA). However, the Federal Government offers no guidance about who offers what kind of training or how much it will cost. At the State level, he might seek assistance from the Departments of Environmental Health, Transportation, Public Works, or any of several others, or from the State Fire Marshal's Office. Even if he should succeed in discovering the right group, no funding may be available, and no national training standards have been developed to help choose the appropriate course.

While no national framework for ensuring training exists, all levels of government have a potent tool for dealing with problems/regulations. The massive regulatory code governing the transportation of all hazardous materials except bulk water transport is Title 49 of the *Code of Federal Regulations* (known as 49 CFR). More than 30,000 hazardous materials are subject to these regulations. However, although DOT is authorized to regulate all hazardous materials shipments, and does so for rail, air, and water, it has chosen to exclude intrastate highway transport specifically from regulatory coverage under 49 CFR.[7] In addition, individual States and regional and local governments enact laws, set regulations, and undertake enforcement activities—primarily for the highway mode—that overlap or vary from those set by the Federal Government and by neighboring jurisdictions. The result is a complicated and constantly changing set of controls. Even those Federal officials who write or work directly with the regulations or the memoranda of understanding governing the process can explain only the Federal roles clearly. Hazardous materials enforcement officers and transportation industries—manufacturers, shippers, and carriers—find this welter of regulations inefficient, confusing, and difficult to comply with and enforce.

Moreover, data and information about shipments are so poor and difficult to acquire that State and local regulations are often developed with little or no understanding of the magnitude or nature of the problems to be controlled.

---

*Emergency response to a railroad accident often involves an industry/railroad response team as well as public response personnel.

[6] U.S. Congress, Office of Technology Assessment, *Transportation of Hazardous Materials: State and Local Activities*, OTA-SET-301 (Washington, DC: U.S. Government Printing Office, March 1986), p. 63.

[7] 49 CFR Part 171.1.

For example, gasoline is by far the most frequently transported hazardous material, accounting for almost half of all hazardous materials transported over the highways. Furthermore, almost all gasoline truck trips are local deliveries, making the risk of exposure to the public higher for gasoline than for any other substance. Not surprisingly, therefore, gasoline transport is responsible for more injuries and dollar damages than all other hazardous materials together. Yet State and local transportation restrictions are usually aimed at shipments of hazardous wastes or radioactive materials, which together account for less than 3 percent of all hazardous materials shipments and are already heavily regulated.

This report discusses transportation of all hazardous materials—commodities, radioactive materials including spent nuclear fuel, and hazardous wastes—that travel by truck, rail, water, or air. Pipeline transport is not considered, as its regulation is entirely different from that of vehicles or vessels. One thing is clear—regardless of whether gasoline, anhydrous ammonia, or high-level nuclear waste is being transported, everyone responsible wants to ensure public safety and prevent environmental damage. Disagreements arise primarily over how best to accomplish these aims and how to distribute the costs of the necessary safeguards equitably. OTA has identified four paramount policy issue areas for congressional consideration:

- **Training.**—Development of a national strategy to provide training for State and local emergency response and enforcement personnel. Training guidelines, adequate funding, and providing comprehensive information on existing resources are key components.
- **Federal/State Regulations.**—Greater consistency in Federal, State, and local regulations and enforcement, including extending Federal reporting requirements for hazardous materials releases to intrastate highway transportation. Coordination and cooperation between all levels of government in developing consistent regulations will reduce conflicts and duplication of effort.
- **Public Information.**—Increased availability of information about the transportation of hazardous materials, including spent nuclear fuel. More coordinated Federal data-collection activities would support regulatory decisions and improve public information programs. National guidelines for community right-to-know legislation and Federal assistance for State and local information gathering could be helpful.
- **Containers.**—Better Federal coordination in setting container regulations, including those for spent nuclear fuel. Two areas warrant specific attention: 1) technical requirements, such as changes in gasoline cargo tankers and design tests for spent fuel casks; and 2) operational and procedural practices, such as quality control and industry training.

Underlying these four issues is the lack of clear definition of Federal and State roles and of effective program coordination to make activities more accessible and cost-effective. The basis for many programs to address these issues already exists, but lack of communication and integration between and among different levels of government diminishes their effectiveness.

FEDERAL GOVERNMENT RESPONSIBILITIES

Authority for issuing Federal regulations and developing and implementing programs rests with many different entities. The Federal Government has four roles related to hazardous materials transportation: regulation, enforcement, emergency response, and data collection and analysis. DOT is the lead agency for establishing and enforcing regulations regarding safe transportation of hazardous materials. The DOT Research and Special Programs Administration (RSPA) has authority to issue regulations on many aspects of hazardous materials containers, except for bulk marine shipments, which are regulated by the U.S. Coast Guard. RSPA shares inspection and enforcement activities with the modal administrations, the Federal Highway Administration, the Federal Railroad Administration (FRA), the Federal Aviation Administration, the National Highway Traffic Safety Administration, and the Coast Guard, which also have authority over the vehicles or vessels themselves. RSPA is responsible for identification of hazardous materials as well as:

- regulation of hazardous materials containers, handling, and shipments;
- development of container standards and testing procedures;
- inspection and enforcement for multimodal shippers and container manufacturers; and
- data collection.

Another group of agencies—the Nuclear Regulatory Commission (NRC), EPA, and the Occupational Safety and Health Administration (OSHA)—regulates other aspects of hazardous materials transportation. NRC has jurisdiction over high-level radioactive substances in the civil sector, EPA has responsibilities for chemicals and hazardous nonnuclear wastes, and OSHA is concerned with worker safety. These agencies also undertake training activities and provide technical support for State and local governments.

Three additional agencies have nonregulatory functions related to the transportation of hazardous materials. The U.S. Department of Energy (DOE) will be responsible for high-level nuclear waste movement, storage, and disposal under the Nuclear Waste Policy Act of 1982. The U.S. Department of Defense (DOD) transports many hazardous materials for military purposes. FEMA is responsible for coordinating Federal assistance, planning, and training activities for all types of emergency response with State and local governments. See table 2 for a summary of Federal agency activities.

The data-collection function is similarly spread among Federal agencies, most of which record accidents and spills and monitor compliance and, sometimes, carrier performance. RSPA is the principal agency collecting data on releases of hazardous materials during transportation, but every other Federal entity keeps records pertaining to its area of interest. General commodity flow information is collected by the Bureau of the Census, making possible estimates of hazardous materials flows, and RSPA has made good use of some of the census data for a truck flow study. However, budget constraints at the Bureau of the Census have restricted its data collection considerably, and no additional analysis or exchange of hazardous materials transportation flow infor-

Table 2.—Federal Activities in Hazardous Materials Transportation

	Regulation of:									
	Hazardous materials†	Containers	Vehicles and vessels	Operators	Planning	Recordkeeping	Inspection	Enforcement	Training	Emergency response
DOT:										
RSPA	X	X			X	X	X	X	X	
FHWA		X[a]	X[b]	X	X	X	X	X	X	
FRA		X[a]	X		X	X	X	X	X	
FAA		X[a]	X		X	X	X	X	X	
USCG	X	X[a]	X	X	X	X	X	X	X	X
FEMA					X				X	X
EPA	X				X	X	X	X	X	X[c]
NRC	X	X			X	X	X	X	X	X[d]
DOE	X[e]	X		X	X	X	X	X	X	X[d]
DOD	X[e]			X	X	X	X	X	X	X

KEY: DOT—Department of Transportation; RSPA—Research and Special Programs Administration; FHWA—Federal Highway Administration; FRA—Federal Railroad Administration; FAA—Federal Aviation Administration; USCG—United States Coast Guard; FEMA—Federal Emergency Management Agency; EPA—Environmental Protection Agency; NRC—Nuclear Regulatory Commission; DOE—Department of Energy; DOD—Department of Defense.

†This category includes hazardous substances, hazardous wastes and radioactive materials, and the tools for communication of those hazards such as shipping papers, placarding, and marking.

[a] Package/container design.

[b] In addition, National Highway Transportation Safety Administration issues requirements for new vehicles.

[c] EPA responds to accidents involving the release of products regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and oil spills in coastal and ocean water.

[d] Depends on the type of radioactive material, severity of the accident, and the adequacy of State and local response programs.

[e] In cases of national security, DOD and DOE are not required to comply with DOT regulations provided they follow standards affording equal protection.

SOURCE: Office of Technology Assessment.

mation from other agencies is evident.[8] This type of data is essential as a denominator for even crude analysis of accident rates, and its lack is a deficiency in RSPA's planning and regulatory activities.

Perhaps more serious is the lack of interagency coordination for recordkeeping on accidents and releases of hazardous materials. For its own records, RSPA depends primarily on reports filed by mail on its Form 5800.1, which has numerous deficiencies in itself. The databases kept by other DOT modal administrations and the National Transportation Safety Board (NTSB) contain numerous accidents OTA has identified as being related to hazardous materials that are missing from the official RSPA accident file, the Hazardous Materials Information System (HMIS). Although the potential exists for much better data exchange and use, HMIS reporting requirements are so narrow, and data collection and analysis are so inadequate that RSPA has insufficient information to set timely priorities for regulatory actions. Rulemakings are initiated either by petition from industry or an interested party, or are forced on DOT by widespread public concern, often focused through NTSB or Congress. This kind of reactive rulemaking does not measure up to today's needs. Often research or data analysis could have supported the need for change earlier, or the need was documented some time ago—for example, the reclassification of methyl isocyanate from flammable to toxic inhalant—and no action was taken for years.*

The division of responsibilities among multiple Federal agencies and DOT entities developed on the theory that hazardous wastes, radioactive materials, emergency response training, modal safety concerns, and multimodal hazardous materials questions should be addressed by those with appropriate expertise. The Memoranda of Understanding that have been signed between DOT and NRC, EPA, and DOE focus on delegating responsibility under specific laws. Aside from these agreements, there are no formal mechanisms for interagency regulatory coordination, and no attempt at developing a uniform basis for rulemaking or establishing criteria to set rules and standards has been made. Issues that require the coordinated attention of more than one Federal agency, or Federal and State or industry coordination, often take years to resolve, and no effective effort has been made to improve the situation. The one official Federal coordinating group that does exist, the National Response Team, considers primarily emergency preparedness and response activities and has in the past concentrated on managing Federal response. Until very recently, it has done little to define agency roles, diminish the public's confusion, or meet the crying need for State and local emergency response training with vigorous Federal action.

---

[8] However, a good deal of analysis related to risk items, such as transporting outdated chemical weapons over different routes, for example, has been carried out at Oak Ridge National Laboratory. S.A. Carnes, et al., Oak Ridge National Laboratory, *Preliminary Assessment of the Health and Environmental Impacts of Transporting M55 Rockets From Lexington-Blue Grass Depot Activity, Anniston Army Depot, and Umatilla Depot Activity to Alternative Disposal Facilities* (Washington, DC: U.S. Department of Energy, November 1985).

*This reclassification was suggested at the Williamsburg Conference sponsored by the National Academy of Sciences in 1980 and was the subject of the U.S. Department of Transportation (DOT) activity in the early 1980s. The effort was dropped, until the National Transportation Safety Board and congressional concern highlighted the issue after the tragic deaths and injuries in Bhopal, India. The subsequent DOT rulemaking was completed in under a year.

Complicating matters further, a number of international regulatory bodies have developed recommendations and standards affecting all modes of transport. Federal regulations are being revised to conform with these international codes, particularly those for the air and water modes. Recommendations for objective performance standards for nonbulk packaging issued by the United Nations Committee of Experts on the Transport of Dangerous Goods have been adopted by many countries. However, DOT has not yet adopted performance standards for nonbulk packagings, even though a proposal has been under consideration since 1982.

The absence of effective Federal program coordination hampers State and local access to available planning, information, and financial resources. Moreover, authority for matters pertaining to hazardous materials rests with a similar variety of agencies in most States. Frequently, responsibility is equally fragmented at the local level. In view of the numbers of agencies and levels of government involved, it is not surprising that hazardous materials transportation safety and training programs and activities, and even some regulations, are uncoordinated, preventing efficient use of already scarce resources.

FINDINGS AND POLICY OPTIONS

Hazardous materials transportation safety is not a local, State, or even national problem only; it has global implications. It is decidedly not a partisan issue, and there is little disagreement on the most important problems. However, finding solutions acceptable to a sufficiently broad spectrum of interested parties to achieve the consensus required for legislation is not easy.

Policy options are clustered around the major issues identified earlier: training for emergency response and enforcement activities, regulatory consistency and reform, data collection and information needs, containers, and cutting across these, Federal programmatic coordination.

Emergency Response Training

Emergency response to hazardous materials incidents is unlike traditional firefighting in that response personnel must identify the specific chemical hazards facing them before approaching an accident or attempting a rescue mission.[9] An inappropriate response to an accident involving unfamiliar chemical products can endanger individuals, the surrounding community, and the environment. Local fire or police department personnel are usually the first to respond to a hazardous materials accident during transportation, and even in a plant, hence their training is of primary importance. Of the approximately 2 million people in the emergency response network, OTA estimates that a maximum of 25 percent have received adequate training to meet a hazardous materials emergency. Training programs are offered primarily by the States or private organizations, and by the Federal Government. Most local response forces have insufficient financial resources to take advantage of available train-

---

[9] Charles Wright, lecture at Hazardous Materials First Responders Course presented by Union Pacific Railroad and U.S. Environmental Protection Agency Region VII, April 1985.

Photo credit: Research and Special Programs Administration, DOT

Unprotected emergency response personnel in action—a dangerous situation.

ing. The spectrum of local hazardous materials training ranges from well organized and funded hazardous materials courses offered by highly trained individuals to little or nothing.[10]

Of the approximately 1.2 million firefighters in the Nation, 85 percent are volunteers and 15 percent are paid employees of municipal, county, or local governments.[11] However, of the roughly 1,000 persons participating annually in the resident training program in hazardous materials emergency response offered by FEMA at its Emmitsburg, Maryland, training center, 85 percent are paid personnel and 15 percent are volunteer.[12]

According to the National Association of Chiefs of Police, there are between 450,000 and 500,000 local sheriffs and police personnel employed by State and local governments;[13] who are also often called on to provide emergency response. Over 450 training courses in hazardous materials emergency response, planning, and enforcement are available in the Nation, according to a study undertaken at congressional direction by DOT and FEMA in 1985.[14] Costs for these courses are impossible to isolate, since only aggregate figures are available, but the total dollars spent for training in both emergency response and enforcement, as reported in the Federal study, total $36 million for the 5-year period of 1980-84.[15] While the study did not capture the universe of State and local training, OTA's own research implies that the bulk of the dollars spent have been reported. Moreover, the Federal dollars are of the greatest interest.

---

[10] Association of Bay Area Governments, *National Directory of Hazardous Materials Training Courses* (San Francisco, CA: March 1985), p. 8. Data supplied by the International Association of Fire Chiefs to OTA.

[11] Joseph Donovan, National Fire Academy, Federal Emergency Management Agency, Emmitsburg, MD, personal communication, 1985.

[12] James Covington, Hazardous Materials Instructor, Federal Emergency Management Agency, Emmitsburg, MD, personal communication, 1985.

[13] Gerald Arenberg, Executive Director, National Association of Chiefs of Police, personal communication, 1985.

[14] U.S. Department of Transportation and Federal Emergency Management Agency, "Report to Congress: Hazardous Materials Training, Planning, and Preparedness," unpublished draft, January 1986.

The majority of Federal expenditures have been for the longer term, advanced level response training courses of the type offered by FEMA at Emmitsburg. Such courses are appropriate for personnel who will be part of a hazardous materials emergency response team in an area with an identified high-hazard potential, although these represent a relatively small percentage of the Nation's firefighters. The volunteer firefighters and emergency response forces from small urban and rural areas usually have no hazardous materials training at all. Participants in an April 1985 FEMA-sponsored workshop of national, State, and local experts agreed that emergency response personnel in these areas are most in need of training.[16] Moreover, according to a FEMA disaster planning survey,[17] hazardous materials emergencies comprised 4 of the top 10 emergencies considered likely to occur in a community.

OTA concludes that a national strategy to provide an appropriate level of hazardous materials emergency response training, either basic or advanced, to local personnel is an urgent priority. OTA estimates that approximately 1.5 million emergency response personnel need additional hazardous materials training, with the vast majority needing basic first response training. Maintaining the level of expertise through refresher courses for those already trained is also important. Additional expenditures necessary to train 10 to 15 percent of those needing training total $15 to $20 million annually, OTA estimates. This sum could come from a variety of public and private sources, and assumes maximum cooperation between Federal, State, and private groups now providing training and coordinated use of existing training resources, including those of industry. (See table 3.) The Federal role in developing a comprehensive national training strategy, building on existing training resources, could include assistance in preparing training guidelines, helping to ensure adequate funding, and developing a training information clearinghouse.

The problem is not that courses are unavailable, but rather that those who need them are unable to take advantage of them. The reasons are institutional as well as financial. Better organization and utilization of existing resources could improve training delivery considerably. Existing Federal hazardous materials emergency response training and training support programs in FEMA, EPA, the Coast Guard (DOT), NRC, and DOE need to be coordinated and made complementary. They also could be better utilized to meet State and local training needs as well as those of Federal forces.

---

[15] Ibid., p. ix.

[16] Robert S. Wilkerson, Chief, Technological Hazards Division, Federal Emergency Management Agency, personal communication, June 1985.

[17] Federal Emergency Management Agency, *Hazard Identification, Capability, Assessment, and Multi-Year Development Plan for Local Governments*, CPG 1-35 (Washington, DC: January 1985).

Table 3.—Calculations for Costs of Hazardous Materials Emergency Response Training for First Responders[a]

Target audience:
First responders—firefighters, police, hospital emergency room staff, and ambulance drivers.

Size of target audience:
1.5 million (approximate)

Nature of training:
Basic training covering identification of hazardous materials, the importance of self protection, protection of the public and environment, and the notification of authorities.

Duration of training:
Modular training geared to appropriate target audiences would be developed and taught by trained instructors. Must provide opportunities for role playing and group problem solving and acquaint response personnel with the unique dangers of hazardous materials response.

Key cost components:
Course development, handout materials/workbooks, instructional services, training personnel, travel, and equipment.

Estimated average cost per trainee:
$100[b]

Estimated trainee completions per year:
150,000 to 225,000

Required annual funding total:
$15 to $22.5 million

[a] This type of training emphasizes the differences between hazardous materials response and firefighting. Training covers the dangers inherent in hazardous materials accidents, how to identify hazardous commodities, appropriate responses, and the application and use of protective equipment. Basic training is not designed to cover advanced hazardous materials response techniques or cleanup procedures.

[b] OTA estimates based on tuition for existing courses and interviews with officials and course instructors. Charges vary widely—one large and successful 2-day program is free, whereas another more comprehensive 3-day course charges tuition of $450.

SOURCE: Office of Technology Assessment.

However, choosing the right agency to coordinate Federal emergency response programs and administer any special funding program is problematic. Institutionally, that agency is FEMA. Yet while there is widespread agreement about the need for a strong, central Federal leadership role in emergency response training, there is equally widespread doubt about whether FEMA can provide that leadership. Moreover, States find FEMA's grant requirements so restrictive that they cannot meet their State's program needs and still qualify for FEMA grants. It is only fair to say that some of FEMA's administrative difficulties stem from the statutory restrictions of the Civil Defense Act of 1950, FEMA's primary source of funds for hazardous materials activities.* However, DOT, EPA, DOE, and NRC have narrower areas of emergency response expertise and their responsibilities for training are focused primarily on Federal response.

One congressional option is to charge the National Response Team with responsibility for coordinating hazardous materials emergency response training and developing guidelines for courses and levels of training using a consensus process. Congress might wish to designate DOT, EPA, or FEMA, as members of the National Response Team with direct responsibility for training, as lead agency for developing a direct contract program with States for funding training. Funds distributed to States for hazardous materials transportation emergency response training might carry a stipulation that some funds be passed through to local jurisdictions.

---

*The Emergency Management Assistance Program is the vehicle through which States receive funds for activities related to hazardous materials.

Over the past decade, hazardous materials manufacturers have taken steps to address safety concerns. Industry's involvement in hazardous materials emergency response ranges from technical assistance to specialized response teams. Many large petrochemical and chemical manufacturers train and maintain company emergency response teams for both their fixed facilities and transportation accidents. The best known effort is the Chemical Transportation Emergency Center (CHEMTREC), established in 1970 by the Chemical Manufacturers Association (CMA). CHEMTREC staff provide chemical information by telephone for use in onsite decisionmaking and notify manufacturers of accidents involving their products. CMA has also developed the Community Awareness and Emergency Response Program, which encourages industry and community cooperation in the development of emergency response plans. The Channel industries, the Pesticide Safety Team Network, and Chlorep are other examples of cooperative emergency response capabilities provided by industry.

These specialized information and emergency response units were formed by industries to respond to accidents involving their products. With their specialized resources, detailed knowledge of hazardous materials, and extensive product information, industries can provide a logical adjunct to public safety capabilities for fixed facility and hazardous materials transportation emergency response. Furthermore, some industry training resources have been made available to meet State and local needs. A public-private agency cooperative training program has been established by EPA and the Union Pacific Railroad in EPA Region VII. They offer a 2-day training course for hazardous materials identification, free of charge to multidisciplinary groups with emergency response duties.

The most cost-effective training programs are those that use train-the-trainer techniques. These courses also serve as conduits for programs developed according to nationally accepted guidelines. Congress might consider giving funding priority to States whose training officials participate in Federal hazardous materials training programs and subsequently develop State training networks using train-the-trainer courses to improve delivery of training to local emergency response personnel.

OTA concludes that development of national hazardous materials emergency response training guidelines covering course offerings and levels of training is urgently needed by State and local officials. Guidelines for training in equipment use and maintenance would be useful as well. Activities begun this year by the National Response Team and the National Fire Protection Association to develop guidelines are commendable. Broad-based participation of producers, shippers, and emergency response personnel in developing the guidelines is important. At the Federal level, this would mean that DOT, FEMA, EPA, and probably NRC and DOE need to cooperate and reach agreement, as well as firefighters and other safety groups.

Finally, OTA finds that developing a national clearinghouse to make existing information on hazardous materials training programs and resources available to State and local personnel, both in hard copy and online, would provide an extremely useful service to emergency response forces. The 1985 DOT/FEMA study provides basic information already in computerized form for such a service. Several successful programs exist as models in other areas, most notably, a DOT-sponsored microcomputer information exchange administered through a university.[18]

Training for Enforcement

Consistent, strong enforcement of hazardous materials regulations is a major accident prevention tool. **State enforcement activities have become increasingly important as Federal inspection and enforcement manpower has been reduced.** The number of DOT vessel and vehicle inspections declined in 1984 for every mode except rail, where special congressional appropriations have been made. The DOT man-years devoted to hazardous materials inspections fell from 237 in 1979 to 111 in 1984,* with the most notable decline in the Coast Guard. Appropriations to provide additional support for Federal enforcement have not been forthcoming. However, a DOT-State contract program, the multi-modal State Hazardous Materials Enforcement Development (SHMED) program, helped 25 States develop hazardous materials enforcement expertise and training capabilities. Developed by RSPA through the DOT Transportation Safety Institute, SHMED used home study materials and train-the-trainer techniques to reach large numbers of enforcement and industry personnel in participating States. The program has been both effective and inexpensive; overall expenditures through 1986, when the program expires, will have amounted to just over $3 million.

However, after the SHMED program is phased out, DOT financial support for State hazardous materials enforcement development will continue for motor vehicles only, bolstered by the Motor Carrier Safety Assistance Program (MCSAP), administered by the Bureau of Motor Carrier Safety (BMCS) in the Federal Highway Administration. The MCSAP grant program is designed to improve State capabilities to enforce motor carrier safety regulations, to conduct commercial vehicle inspections both in terminals and along roadsides, and to collect safety data. MCSAP funds may be applied to hazardous materials enforcement activities at the discretion of the State. MCSAP expenditures for 1985 were $14.2 million, and the Secretary of Transportation requested the full funding level of $50 million for MCSAP funds for 1987.

Hazardous materials flow and accident data, poor as they are, show clearly that truck transport has the greatest risk of accidents, and Federal and State inspectors in 1985 pulled out of service for violations an all time high of about

---

[18] Ron Jensen-Fisher, Project Manager, Urban Mass Transportation Administration, Transit Industry Microcomputer Exchange, personal communication, March 1986.

*Complete 1985 data were not available in time for OTA's report.

40 percent of inspected trucks. MCSAP gives priority to general motor carrier safety programs, justifiably in light of these facts. However, concerns that hazardous materials enforcement activities are being slighted—especially for the rail, water, and air modes—have been raised by many State, local, and industry officials.* **OTA finds that Federal programs developed through the Transportation Safety Institute for enforcement training have provided effective support for State enforcement training needs. In addition, OTA concludes that MCSAP provides essential funding and support for State motor vehicle enforcement and training programs, but that Federal enforcement programs are not adequate for the other modes. If Federal inspections continue to decline, support for development of alternative hazardous materials inspection and enforcement programs for water, rail, and air is needed.**

Responsibility for inspections of container manufacturing facilities might best be left with the Federal inspection forces. The specialized expertise required and the relatively small number of inspections would make development costly for State capabilities to check compliance with container design requirements. Adequate levels of inspection and enforcement, however, even for these targets, would require increased Federal forces. In 1984, for instance, only 144 of the more than 7,000 container manufacturers were inspected by RSPA and FRA, and only 5,220 of the estimated 100,000 shipping facilities were inspected.[19] **Congress might increase DOT's enforcement budget particularly in the areas of water, rail, and air hazardous materials inspections, which are not covered by State enforcement and inspection programs. OTA concludes that Federal inspection forces, which have been halved over the past 5 years while shipments of hazardous materials have been increasing,[20] are now insufficient to ensure adequate inspection levels.** (See table 4.)

---

*This has been a pervasive theme throughout OTA's information gathering.

[19] U.S. Department of Transportation, *Annual Report on Hazardous Materials Transportation, Calendar Year 1984* (Washington, DC: 1984), p. 42.

[20] Mark Abkowitz and George F. List, "Hazardous Materials Transportation Flow and Incident/Accident Information Systems," OTA contractor report, January 1986.

Table 4.—Hazardous Materials Transportation Inspectors

	1979	1980	1981	1982	1983	1984
Total work-years:						
United States Coast Guard	115.5	115.50	155.76	50.00	40.00	12.0
Federal Aviation Administration	36.9	19.04	17.75	8.20	14.08	15.0
Federal Highway Administration	47.0	49.25	47.25	40.20	25.28	28.0
Federal Railroad Administration	28.2	33.60	34.65	33.00	46.40	48.0
Materials Transportation Bureau (Office of Hazardous Materials Transportation)	9.0	10.00	7.50	6.75	6.75	7.5
Total	236.6	227.39	262.91	138.15	132.51	110.5

NOTE: The term "work-years" refers to the aggregate annual time spent by all inspectors in a mode.

SOURCE: Office of Technology staff—based on Department of Transportation Annual Reports.

Financing Emergency Response and Enforcement Training

OTA finds that the approximately $7.2 million* spent annually for emergency response and enforcement training is insufficient to provide adequate hazardous materials training. While the SHMED and MCSAP programs have provided basic Federal support for enforcement training, emergency response training has not received similar Federal attention. The management of the SHMED program provides a model for a cost-effective federally supported emergency response training program. It made good use of existing resources, provided uniform training, used train-the-trainer techniques, and required that States adopt Federal regulations, designate a State lead agency, and participate in funding. However, total Federal SHMED expenditures were $3 million for a program that reached 26 States, and perhaps less than half the national enforcement officer population of about 500,000; a totally different level of need exists for emergency response training.

OTA estimates that the minimum training time needed for an introductory course for first response to hazardous materials emergencies is 2 days, assuming that the trainees are already trained firefighters, enforcement officers, or medical technicians.** Costs for this basic training depend on where and how it is carried out. Table 3 shows estimates for an annual training program to begin addressing State and local emergency response training needs. **OTA concludes that an annual Federal funding level of approximately $5 to $7 million, added to $10 to $15 million derived from other sources and monies now being spent, could provide adequate Federal assistance, if existing resources are reorganized and tightly managed.**

Possible Federal funding sources include:

- general revenue;
- Federal funding programs related to hazardous materials transportation, such as the Surface Transportation Assistance Act (the fuel tax), the Nuclear Waste Policy Act, or the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund); and
- creation of a dedicated fund based on user fees, such as those generated by a permit or registration fee levied against hazardous materials industries.

The fuel tax is the most broad-based of the three special tax-based funds, and gasoline transport accounts for the largest dollar damages. Since truck accidents require the most frequent emergency response activities, tapping fuel tax funds to support emergency response training provides for a degree of equity. The Nuclear Waste Policy Act provides some funds for State and local activities related to transportation, but such funds are generated by nuclear utilities, and their shipments represent far less than 1 percent of total annual hazardous materials shipments. Superfund already has substantial claims against it and specifically excludes transportation from some programs.

---

*Average annual expenditure reported by training organizations in the Department of Transportation/Federal Emergency Management Agency study.

**OTA calculations, based on interviews with emergency response trainers and OTA staff experience with four types of emergency response training: industry, jointly sponsored public and private courses for community first response personnel, Federal training for public response, and Federal training for Federal response.

If used to fund emergency response training, a Federal registration or permit program could have major adverse impacts on similar State and local activities, an issue discussed further in the section on regulatory consistency. Moreover, the administrative costs for such a Federal program need to be carefully considered. **If industry is to support a new user fee to fund training, it will require assurance that:**

- **the amounts assessed relate to the magnitude of local training needs,**
- **the funds reach those most in need,**
- **a fixed limit is placed on the amount it must contribute,**
- **local jurisdictions make maximum use of existing regional resources and participate in the funding effort in some way, and**
- **no individual State or local fee programs are implemented for this purpose in participating jurisdictions.**

Two independent groups have endorsed creation of a dedicated fund, g erated by user fees levied against shippers and carriers to support State and local hazardous materials program development and emergency response training. The groups are the Hazardous Materials Coalition, comprised of State and local government organizations and some industry representatives, and the National Hazardous Materials Transportation Advisory Committee, formed by the Secretary of Transportation and comprised of State and local government officials and representatives of industry and labor. Both groups recognize that many jurisdictions already impose registration or permit fees, using them for a variety of purposes frequently unrelated to emergency response, and that requiring payment of another such fee is unacceptable to many industries.* Restrictions on their own fee programs, suggested for jurisdictions choosing to benefit from the Federal fund, may be difficult for States to accept.

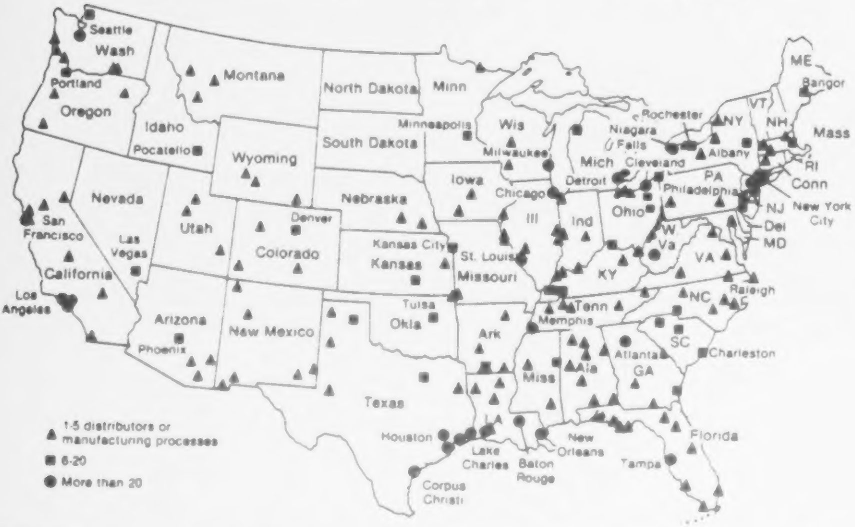
Equity in apportionment of funds is an important consideration, although an appropriate basis is difficult to determine. Funds could be apportioned to States on the basis of population or on the basis of hazardous materials transportation density. However, areas such as the Gulf Coast; California; and the Pennsylvania, Ohio, Indiana, and Illinois corridor, which have the largest amounts of hazardous materials traffic, also have the largest number of industry response teams. (See figures 1, 2, and 3.) Moreover, the need for emergency response training is often not recognized in small urban or rural areas, where the probability of an accident is low, but where the consequences of an accidental spill for untrained response personnel could be severe. Finally, jurisdictions that already have well-developed emergency response capabilities have emphasized to OTA that they need financial assistance to maintain training levels and equipment.

Additional local industry involvement in development and delivery of community hazardous materials emergency response training could be encouraged to defray training costs. Support from Federal and private sources for finan-

---

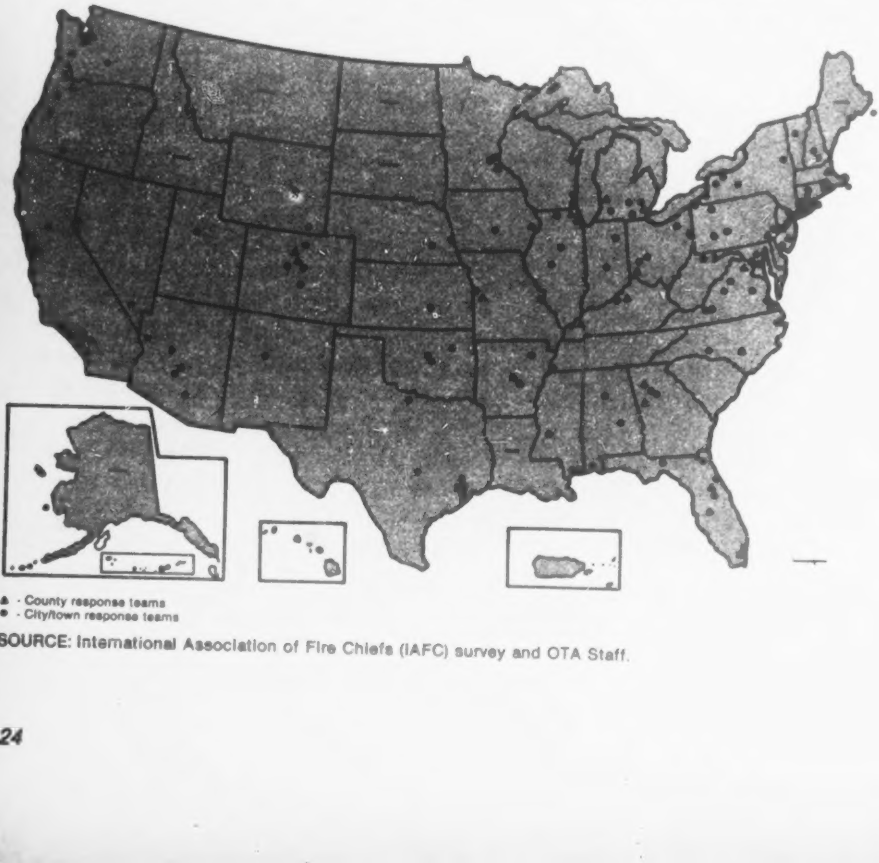
*Two major industry groups, the Association of American Railroads (AAR) and the Chemical Manufacturers Association (CMA) have opposed such a fund in the past. CMA is modifying its opposition, requesting further study to quantify the need; AAR remains opposed.

Figure 1.—The Chemical Plants: Where They Are


Seattle
Wash
Portland
Oregon
Montana
North Dakota
Minn
Idaho
Pocatello
Wyoming
South Dakota
Minneapolis
Wis
Milwaukee
Mich
Detroit
Rochester
Niagara Falls
Cleveland
NY
Albany
VT
NH
ME
Bangor
Mass
RI
Conn
PA
Philadelphia
NJ
New York City
Del
MD
Nevada
San Francisco
Utah
Colorado
Denver
Nebraska
Iowa
Chicago
Ill
Ind
Ohio
W Va
VA
Las Vegas
California
Kansas City
Kansas
St. Louis
Missouri
KY
Los Angeles
Arizona
Phoenix
New Mexico
Tulsa
Okla
Ark
Tenn
Memphis
NC
Raleigh
SC
Charleston
Atlanta
GA
Ala
Miss
Texas
Houston
Lake Charles
Baton Rouge
New Orleans
Tampa
Florida
Corpus Christi
▲ 1-5 distributors or manufacturing processes
■ 6-20
● More than 20

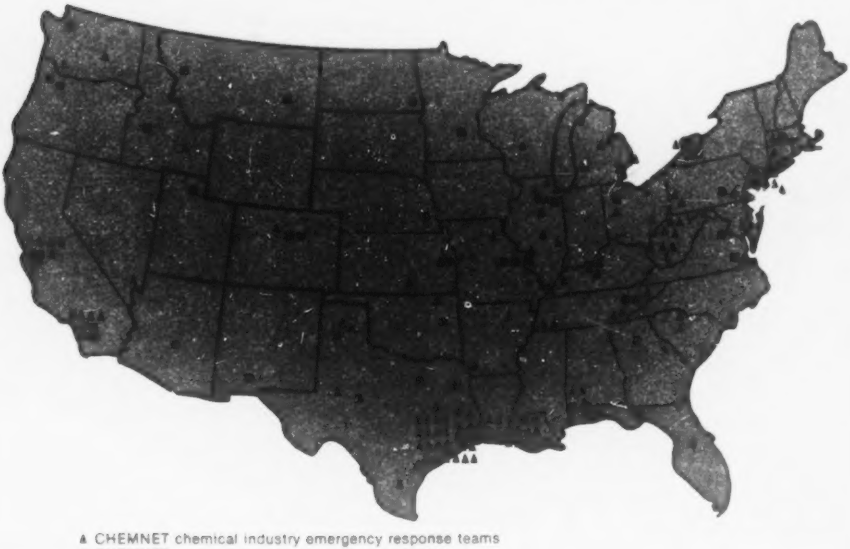
SOURCES: Environmental Protection Agency, SPN Directory of Chemical Producers, Chemical Week Buyers Guide, Chemsources U.S.A., individual chemical companies.

Figure 2.—Public Hazardous Materials Respose Teams


▲ - County response teams
● - City/town response teams

SOURCE: International Association of Fire Chiefs (IAFC) survey and OTA Staff.

Figure 3.—CHEMNET Emergency Response Team Locations



▲ CHEMNET chemical industry emergency response teams
■ CHEMNET contractor emergency response teams

SOURCE: Chemical Manufacturers Association.

cial assistance to State and local jurisdictions will be more readily forthcoming if jurisdictions can show that they:

- have developed an emergency response plan;
- know what their training needs are;
- have local matching funds or resources available; and
- have cooperated with neighboring jurisdictions in such efforts as joint planning, information collection, and mutual aid agreements.

Regulatory Consistency

The authority granted to DOT under the Hazardous Materials Transportation Act (HMTA) to regulate hazardous materials is comprehensive. However, putting aside questions of whether RSPA has adequate staff for program administration, several decisions made by DOT about how to exercise its authority have limited the applications of its regulations, motivating international organizations and State and local governments to act where they saw a need.

First, DOT has chosen not to apply the regulations to solely intrastate motor transport except for hazardous wastes and substances and flammable cryogenics in portable tanks and cargo tankers.[21] Many public officials, common carriers, and large private carriers that have both interstate and intrastate activities are surprised to learn that most carriers operating solely intrastate are exempt from many DOT regulations. For example a release of a hazardous material by an intrastate trucking company need not be reported to DOT, and second- or third-hand cargo tankers that no longer meet Federal requirements may be operated within some States. While States accepting MCSAP funds are required to apply 49 CFR in enforcement actions against intrastate carriers, this does not ensure that the reporting requirements and container regulations will be applied.

---

[21] 49 U.S.C., Part 171.1 (a).

Second, DOT has not exercised its authority to establish a registration program for shippers and carriers. This has meant that it does not have complete data about the extent of the group it regulates and that the portions of the data that would be useful to State and local officials are not available.

Since the early 1970s, State and local governments have been increasingly active in regulating shipments of hazardous materials to supplement Federal regulations and enforcement and to ensure adequate safety for their jurisdictions. Because each was formulated to meet immediate and separate goals, State programs affecting hazardous materials transportation, like their Federal counterparts, are now characterized by a multiplicity and diversity of activities and areas of jurisdiction. Responsibilities are divided among State utility commissions, transportation, health, environmental, and emergency preparedness agencies. Moreover, great variation among State laws and regulations exists, even though most States have adopted 49 CFR wholly or in part. Finally, the enormous differences in State requirements for truck driver's licenses mean there is no assurance that a qualified driver is behind the wheel of a truck carrying hazardous materials.

Furthermore, finding Federal data lacking in the necessary detail, State and local governments and transportation facilities have enacted a variety of regulations intended to provide information they need for emergency response planning, enforcement activities, and development of local routing restrictions. The result is that shippers and carriers have to comply with multiple State and local registration, licensing, permitting, and shipment notification requirements. Additionally, differing right-to-know laws authorizing public officials to obtain information from facilities within their jurisdictions have been passed at State and municipal levels. The provisions of Good Samaritan laws also vary from State to State; requiring that emergency response personnel, particularly special industry teams that operate in more than one State, be aware of these differences. This wide variation in regulations is clearly at odds with the intent of the HMTA.

Another important regulatory activity of State and local governments is the designation of routes that must be followed by transporters of hazardous materials. Existing highway routing policies established by DOT permit State and local route designations to accommodate local traffic conditions. The Federal highway routing rule for radioactive materials requires the use of Interstate highways or alternate routes designated by State agencies, while a more general requirement for nonradioactive materials instructs carriers to avoid heavily populated areas. Although DOT guidance documents advise States and localities to use explicit safety criteria and involve all affected parties early in making route designations, reaching a consensus is often difficult. In some cases, rerouting has shifted risks to jurisdictions lacking emergency response capabilities; other designations have been contested because affected communities or States were not consulted.

The assumption of greater regulatory and enforcement responsibilities has meant heavier financial burdens for States and localities. Although the SHMED program and MCSAP have provided many States with some funds for the development of hazardous materials enforcement programs, local governments usually do not benefit directly from Federal grant programs to the States. To pay for their inspection, enforcement, or emergency response programs, many States and municipalities require shippers and carriers of hazardous materials to pay a fee when they register or apply for a license or permit. As most State and local fees and requirements apply to highway shipments, the trucking industry has been affected most heavily, and carriers argue vigorously that compliance with differing laws and regulations is time-consuming and expensive.[22] The costs include not only payment of registration, permit, and licensing fees ranging from several dollars up to $1,000 per shipment, but also expenses incurred by special staff to keep track of requirements that continuously change. In addition, carriers point out that certain requirements, such as curfews imposed on some special shipments, cause delays and increase risks. By diverting shipments around their own boundaries, jurisdictions imposing such requirements shift risks to other States and communities.

The roles played by States and localities in the regulation of hazardous materials transportation have grown considerably since the HMTA was passed. The act provided the Secretary of Transportation with broad authority and specified that State and local requirements inconsistent with Federal law and associated regulations should be preempted except under certain circumstances. The legislative history of the HMTA indicates that Congress intended to preclude a multiplicity of State and local regulations, exactly the types of varying and conflicting regulations that now exist. While most State and local governments understand and agree with the need for uniform regulations, especially in areas related to containers and hazard communication, they have also found that DOT activities have not provided adequate safety levels in their jurisdictions. They have thus taken the steps they consider necessary to control the risks associated with the transportation of hazardous materials.

There have been no comprehensive efforts to date to resolve interjurisdictional differences. Resolving questions of inconsistency between local, State, and Federal regulations, a task traditionally left to the courts, has been the focus of an advisory administrative review process, established by DOT in 1976. The 16 inconsistency rulings issued since 1978 indicate that DOT believes that permissible State and local regulatory authority is limited to traffic control and eliminating or reducing safety hazards peculiar to local areas, and that each State and locality must assess the impacts of a requirement, such as a routing rule, on other jurisdictions. However, as the DOT inconsistency ruling process does not preclude judicial review, a number of the cases examined by DOT have also been the subjects of lawsuits.

---

[22] U.S. Congress, Office of Technology Assessment, *Transportation of Hazardous Materials: State and Local Activities*, op. cit.

While case-by-case reviews by DOT and the courts are time-consuming and costly, they provide some criteria for assessing the validity of certain types of laws and regulations. However, OTA believes such reviews will not prevent continued adoption of differing State and local requirements, as these provide both needed revenue and valuable data. Any policy or legislative changes to relieve the present situation must address both the financial and informational needs of State and local governments, as well as ease the burden faced by interstate shippers and carriers.

Carrier associations, insurance industry representatives, and State motor vehicle administrators and enforcement personnel have voiced strong support for a national truck driver's license requiring special training. Congress could authorize the development of such a license with special certification requirements for all hazardous materials, including gasoline. Prerequisites for a license should include training and a clean record, and driver certification could be linked to specific types of vehicles. Uniform license requirements and training standards could be developed by DOT, but States would be responsible for issuing licenses and administering the training requirements. State license fees could be set to cover program costs. California has already developed a graded truck driver's license program. A program created by the European Common Market countries requires a hazardous materials driver's license but allows each country to pass its own implementing legislation.

OTA concludes that even if DOT exercised its authority to establish a registration program for its own purposes, the information collected under the program would not completely meet the data needs of States and communities. Thus, **Congress might require development of national guidelines for State information-collection programs in three areas: registration—to determine the number and location of hazardous materials shippers and carriers; licenses or permits—to obtain assurances of fitness from shippers and carriers; and notification—to obtain information on the types of hazardous materials passing through a community or region.** Involving Federal, State, local, and industry representatives in developing both the guidelines and a standard form for requesting information,* would permit consensus and a degree of uniformity. Once States have adopted the guidelines, localities could obtain the information they need from their State agencies. However, bridge and tunnel authorities have special information needs that may include prenotification of certain high-hazard shipments. Assuming that alternative sources of financial support are provided for enforcement and emergency response, State and local fees could be limited to amounts sufficient to cover program administration costs. An annual compendium of State, local, and special authority requirements and contacts would be very useful to interstate shippers and carriers. Industry, DOT, and the States might jointly develop the necessary data for such a compendium.

The broader issue of varying State hazardous materials laws and regulations should also be addressed. Complete information about the scope of existing

---

*The Uniform Waste Manifest, developed jointly by the U.S. Environmental Protection Agency and the U.S. Department of Transportation, is one possible model.

State laws and regulations pertaining to the transportation of hazardous materials is not presently available. While many States have adopted 49 CFR, some have excluded certain types or quantities of hazardous materials and certain intrastate highway shipments. Conversely, other jurisdictions have established regulations more stringent than the Federal ones. **OTA concludes that an assessment of State hazardous materials laws and regulations to determine whether they are more or less stringent than Federal regulations would be a useful first step toward greater regulatory consistency.** BMCS has already begun, at congressional request, a 5-year study program that will lead to greater highway regulatory uniformity, but only in some areas.[23] BMCS is compiling and reviewing State motor carrier laws to determine those that are more or less stringent than Federal requirements in the areas of driver qualifications and training, hours of service, and equipment maintenance. As part of the process, State laws will be reviewed by a panel convened by the Secretary of Transportation. State laws that are less stringent than their Federal counterparts will be preempted; a law that is more stringent will not be preempted unless it has no safety benefit, poses an undue burden on interstate commerce, or is incompatible with Federal regulations. Another study of State motor carrier laws related to finances is being conducted by the National Governor's Association for DOT. Congress could extend these reviews to encompass State hazardous materials regulations or initiate a separate process. **Congress might also wish to require DOT to reduce emphasis on inconsistency rulings, which are issued after a regulation is in place, and to provide technical and policy assistance to States or communities during the process of developing regulations.**

Congress might also consider requiring the expansion of those parts of 49 CFR promulgated by RSPA, such as reporting requirements and container regulations, to cover all intrastate highway transportation. Such a requirement would allow RSPA regulations to address safety issues more comprehensively. However, if this approach is adopted, States are likely to insist that the same preemption criteria as mentioned above be applied.

Routing is an extremely important accident prevention tool available to State and local governments. Although it is likely that developing a routing scheme that enhances overall safety will be a difficult process for some regions, experience in Portland, Oregon, demonstrates that it is possible. The existing routing regulation for nonradioactive hazardous materials could be amended to provide more explicit guidance to communities. The use of existing DOT routing guidelines, which contain a risk assessment methodology and recommend interjurisdictional consultation, could be required. States interested in designating alternate routes to those approved by NRC for shipments of radioactive materials are already required to follow the DOT guidelines embodied in the ruling known as HM-164. The development of criteria for routing shipments of radioactive and other hazardous materials by rail and water might also be considered. **DOT could provide technical assistance to States and communities for applying risk assessment criteria and working through the route-selection process to avert the need for legal action.**

---

[23] This review is authorized by the Motor Carrier Safety Act of 1984, Public Law 98-554, 98 Stat. 2829. State guidelines for compiling, analyzing, and submitting their laws, regulations, and other information were published by the Bureau of Motor Carrier Safety on Jan. 10, 1985 (50 F.R. 1243).

Data and Information Programs

Federal, State, and local governments need data to help them set regulations, plan for emergency response and accident reduction, and target enforcement efforts. Data and information systems pertaining to hazardous materials transportation are kept by many Federal agencies, regional Federal offices, different departments of State governments, and even some local government offices.

Hazardous Materials Flow Information

The most basic data needed for all of these activities are the identities and locations of suppliers, manufacturers, and carriers of hazardous materials. A governmental entity may acquire this information by requiring such firms to register, by conducting an inventory, or by searching existing data. Although it has the authority to do so, RSPA does none of these things and thus has no complete record of the firms it regulates. When they discover that DOT cannot provide them with this important information, State and local governments often impose their own registration requirements or conduct their own inventories. New Jersey and Maryland have completed statewide inventories; Pennsylvania, California, and Denver require registration. The activities, when undertaken by individual States, are costly and time-consuming for both jurisdictions and industry.

To determine what alternative data resources exist at the Federal level, OTA examined current databases. Only one Federal multimodal database exists—the Commodity Transportation Survey, maintained by Bureau of the Census. For a summary of the surveys of data resources on commodity flow, see table 5. The nine regional divisions used in the national databases are shown in figure 4. Highlights of the commodity flow analysis performed by OTA contractors include the following:

- Truck transport accounted for more than 60 percent of all hazardous materials transport (excluding pipeline) in 1982. Gasoline shipments accounted for almost half of the total truck tonnage.
- The average trip length for gasoline trucks was 28 miles, making them predominantly local and intrastate. The average trip length for trucks hauling chemicals was 260 miles, making these trips regional and more likely to be interstate.
- About 90 percent of truck shipments are *intraregional*, as are a high proportion of rail and water shipments.
- The three regions with the greatest concentration of shipments are West South Central, Middle-Atlantic, and South Atlantic (see figure 4), with North Central not far behind.

While these data are instructive in the aggregate, they give State and local planners only some of the information they want about their transportation networks.

Table 5.—Commodity Flow Databases

Databases	Kept by	Years	Modes	Commodity codes	Conversion table	Strengths	Weakness/drawbacks
Commodity Transportation Survey (CTS)	Bureau of the Census	1977	All	5-digit STCC	Yes	• Multimodal • Consistent selection procedure for all sample data points for all modes • Cross-checked against the census of manufacturers	• Only 5-digit level of commodities • No hazardous materials flags • Only shipments from manufacturing sites to first destinations • Only "principal" mode is reported
Truck Inventory and Use Survey	Bureau of the Census	1977, 1982	Highway	Simple classes	No	• Covers all trucks used in the United States • Contains hazardous materials-related data items • Sample biased toward heavy trucks	• No flow data • Only rudimentary commodity information • Tractor database, not a trailer database—reflects tractor use, not trailer use
Motor Carrier Census	Bureau of Motor Carrier Safety, FHWA	Most recent 5 years	Highway	Hazard classes	No	• Comprehensive listing of carriers and truck fleet operators	• No flow data • Mileage and fleet size data are sparse
TRANSEARCH, FREIGHTSCAN, etc	Consulting firms	Varies	All	Varies, up to 7-digit for rail	Yes	• Cross-checked against other production/consumption data • Melding of the best available for each mode	• Truck flows predominantly based on the CTS data (see above) • Not in the public domain
National Motor Truck Database	Consulting firms	1977 to present	Highway	Varies, up to 7-digit STCC	Yes, where commodity code is provided	• Focuses on long-distance highway flows • True flow data • Describes the vehicle used to carry the commodity	• Purposely excludes short-haul truck movements, especially in the Northeast • Not in the public domain
Waybill File	Interstate Commerce Commission	At least past 12 years	Rail, TOFC/COFC	7-digit STCC	Yes	• Well-organized sample (1%) of all rail flows • Database is consistent enough to allow trend analyses • Contains some routing information	• Not all hazardous material flows use the special Hazardous Materials STCC

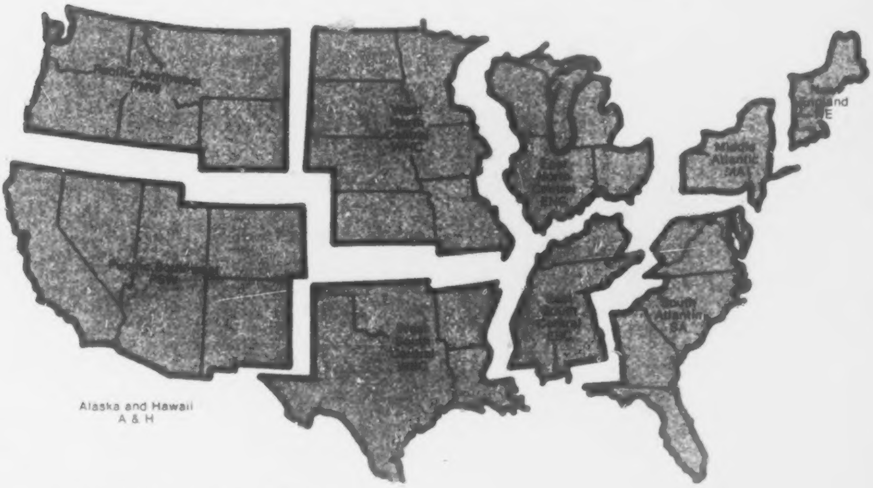
Table 5.—Commodity Flow Databases—Continued

Databases	Kept by	Years	Modes	Commodity codes	Conversion table	Strengths	Weakness/drawbacks
Waterborne Commodity Statistics	Army Corps of Engineers	At least 12 years	Water, domestic and international	4-digit WCSC code	Only to a limited extent	• "100%" sample of all vessel movements • Complete routing information	• Only 163 commodity codes in all, so level of detail is weak • Conversion table has some incorrect cross-references
TRAIN II	Association of American Railroads	Current	Rail, TOFC/COFC	7-digit STCC	Yes	• "100%" data on all movements for participating railroads • Routing information	• Not specifically designed to record car movement histories • Not in the public domain
Hazardous Waste Shipment Data	States, for EPA	Varies	Primarily highway	Either EPA codes or OHMT	No	• "100%" sample of all hazardous waste shipments • Actual flow data	• Many States do not computerize the data • No consistency to commodity code usage • No routing information

ACRONYMS: EPA = U.S. Environmental Protection Agency; FHWA = Federal Highway Administration; OHMT = Office of Hazardous Materials Transportation, Research and Special Programs Administration; STCC = Standard Transportation Commodity Code; TOFC/COFC = trailer on flatcar (piggyback)/container on flatcar; WCSC = Waterborne Commerce Statistics Center (U.S. Army Corps of Engineers)

SOURCE: Office of Technology Assessment.

Figure 4.—Regions Used in This Analysis



SOURCE: Office of Technology Assessment.

OTA finds that Federal data-collection activities are numerous and diverse, each providing modal transportation data of varying completeness. These activities provide useful information on regional flows of hazardous materials transportation, if carefully analyzed, and a sound basis for additional State or local commodity flow data collection. OTA experience in analyzing Federal databases for this report establishes that additional Federal data is unnecessary, that data integration is not a significant technical problem, and that comparative data on commodity flow can be developed.

City officials and planning personnel have been the most vocal in expressing to OTA a need for a national commodity flow data resource. Although an annual printed summary produced by DOT is most frequently mentioned as an appropriate format, some requests have been made for a real-time notification system for especially hazardous shipments. However, emergency response officials consulted by OTA generally prefer to do local inventories and transportation surveys to ensure that their personnel are prepared for any eventuality. They point out that annual summaries describe only last year's shipments and that detailed real-time information would be overwhelming to track and useless for planning and preparedness.[24] As one fire chief said: "What am I supposed to do? Follow the truck around waiting for an accident to happen?"[25] On the other hand, a few local officials and planners want real-time tracking of hazardous materials shipments and have called for the development by DOT of a publicly accessible database to provide this information.[26]

---

[24] Warren Isman, Chief, Fairfax County, VA, Fire and Rescue Department, U.S. Congress, Office of Technology Assessment, *Transportation of Hazardous Materials: State and Local Activities*, op. cit., ch. 4.

[25] Thomas Hawkins, Jr., Chief, Arlington County Fire Department, Arlington, VA, personal communication, January 1986.

[26] The National League of Cities (NLC) has retained in its transportation position paper a request for a U.S. Department of Transportation report on commodity flow. Barbara Harsha, NLC transportation staff, personal communication, January 1986.

A real-time data system is probably the only way to keep abreast of shipments. Many hazardous materials orders are for truck delivery within 36 hours or less, while other shipments are seasonal, related to agricultural or manufacturing cycles. Finally for economic reasons, customers may change supply sources overnight, rendering periodic data collection instantly obsolete. However, the technological groundwork for a system to track hazardous waste shipments, which represent less than 1 percent of hazardous materials shipments, in real time has been developed by a private firm, although the system has not been tested in operation. Even if the technical difficulties for implementing such a system for all hazardous materials could be resolved, the cost has been estimated to be more than $100 million.[27] **Online telephone access to real-time information on all hazardous materials shipments is neither feasible nor cost-effective, OTA concludes.**

OTA finds that although no current Federal resource can provide shipment information with the specificity desired by State and local jurisdictions, annual DOT summaries of aggregate regional shipments could provide useful regional and State commodity flow data. However, while development of a real-time database to track highly hazardous shipments only is technically feasible, its utility for emergency response is questionable. **Finally, OTA concludes that locally conducted data collection, such as hazardous materials facilities inventories and transportation surveys, is useful and has value beyond the data it produces. The process of gathering information provides data for planning and emergency response purposes and has the additional benefit of acquainting the concerned parties with each other and with the hazardous materials transportation in their areas.** Some Federal financial assistance for State data collection is available through existing grant programs. Community right-to-know laws are useful tools for State and local governments in obtaining data, and national right-to-know legislation would bolster implementation of such laws where industry resistance remains.

If Congress chooses to provide support for data gathering, several options are available. DOT could be required to exercise its authority under 49 CFR, Section 1805(b) and develop a registration program for hazardous materials shippers, transporters, and container manufacturers. **OTA finds that a registration program would provide DOT with essential information about the community it regulates and with general commodity flow information that could be helpful to State and local jurisdictions.** DOT needs the information such a program could provide to help set priorities for rulemaking, research, and enforcement actions. A modest registration fee could be imposed to cover costs of administering the program.

In addition, Congress could require DOT to integrate, analyze, and report annually on trends from relevant Federal databases kept by the modal administrations and the Bureau of the Census. For this effort to be effective:

- the collection of data on truck movements would need to be improved;
- cross-reference keys or bridge tables for the commodity codes used by differ-

---

[27] John Mulholland, Source Data Network, personal communication, November 1985.

ent agencies and in 49 CFR would need to be created, or each agency might be required to use a common code for commodities; and

- sufficient funds would have to be allocated to support the effort. OTA estimates that the equivalent of one man-year of effort, between $75,000 and $100,000, would provide a modest start.

A summary of the commodity flow data developed in comparison to DOT accident data in the required annual report to Congress would be useful.

Spill and Accident Data

By law, RSPA must report to Congress annually on the safety of hazardous materials transportation, a requirement that, at a minimum, necessitates good records of hazardous materials accidents and spills. A complete safety analysis would also require some reliable estimates of the total amounts of hazardous materials shipped annually by each mode, but as pointed out above, that information is not available.

Hazardous materials incidents or releases,* defined as any unintentional release during interstate transportation, loading, unloading, or temporary storage related to transportation, must be reported to RSPA in writing within 15 days. The written reports serve as the basis for the HMIS, the sole DOT database specifically on releases, casualties, associated damages, and related information on the material, container, cause, and location of the release. All rail, highway, nonbulk water, and air releases occurring during interstate commerce are supposed to be reported on the RSPA Form 5800.1; intrastate highway and bulk marine transport are significant omissions.

Numerous modal hazardous materials release and accident reporting systems had been developed prior to 1971, when HMIS became the official recordkeeping system for release data. The Coast Guard, the National Highway Traffic Safety Administration, FRA, and BMCS, continue to require reports of modal accidents. Coast Guard reporting requirements are particularly extensive, and most water releases are reported to one or another of the Coast Guard systems rather than to RSPA. In addition, carriers are required to make an immediate telephone report to the National Response Center (NRC), staffed 24 hours a day by the Coast Guard, when a release has resulted in serious consequences, such as a fatality or property damage over $50,000, as a direct result of the hazardous material.[28] NRC has two 24-hour toll-free telephone lines to receive notifications, and several other lines to relay calls to emergency response agencies. Carriers involved in a release sometimes telephone CHEMTREC, a chemical emergency center maintained by the Chemical Manufacturers Association. CHEMTREC is required to notify NRC of significant releases; however, a call to CHEMTREC does not fulfill the RSPA written reporting requirements. Despite this, the CHEMTREC toll-free telephone number is the only telephone number given in DOT's *Emergency Response Guidebook*;* **the NRC telephone number is not listed there.**

---

*Releases are referred to as incidents in 49 CFR reporting regulations. The other release and accident databases studied by OTA all have different definitions of an incident. For the sake of clarity, all Research and Special Programs Administration incidents will be called releases in this assessment.

[28] 49 CFR, 171.15.

Telephone reports received by NRC are logged every evening into a computer at the DOT-Transportation Systems Center (TSC), where the information is retained and managed by RSPA. Nevertheless, RSPA does not include most water releases reported to NRC in its annual report.

Although release reporting is a regulatory requirement, OTA found evidence that the compliance rate is low. The incentive for reporting as required is to avoid the possibility of a civil or criminal penalty; these can include fines ranging up to $25,000 and prison terms of up to 5 years. DOT policy requires consideration of the violator's ability to pay when penalties are assessed. When violators are penalized, the penalty level is frequently too low to deter future violations, because the costs of compliance are greater than those of potential penalties. Thus, some operators consider penalties to be an occasional cost of doing business.[29]

To assess the completeness and accuracy of the HMIS, OTA contractors compared it with relevant Federal modal databases, NTSB data, and State data resources. All of these data resources are available to DOT, with many of them housed at TSC. Through careful analysis of reports filed with DOT modal agencies, OTA contractors were able to determine whether or not hazardous materials were involved in the reported accidents, although data for air shipments are poor. Corrected for duplications and incomplete reports, these comparisons showed that for air and marine transport, the number of releases is underrepresented in the HMIS by factors of 10 and 20, respectively. For rail and Interstate highway transport, the number of releases is underrepresented by factors of 3 and at least 2, respectively. Comparisons of damage estimates in the databases lead OTA to conclude that annual damages are at least 10 times the HMIS figures, averaging more than $160 million a year.**

OTA finds that RSPA has an incomplete record of accidents and releases and has no documentable idea of how much hazardous material is transported. Moreover, RSPA officials regard data collection as a secondary function[30] despite its importance to risk, hazard, and regulatory analysis and to planning for technological and industrial changes. The HMIS is currently an inadequate database. It misses numerous releases recorded in other Federal databases because releases occurring during intrastate highway and bulk marine transportation need not be reported, the reporting requirement is not enforced, and no effort is made to gather accident data other than that reported on Form 5800.1. Augmenting and improving the HMIS need not be extremely costly.

---

*The *Emergency Response Guidebook*, developed and widely distributed free by the U.S. Department of Transportation (DOT), gives basic hazard and first response information for hazardous materials regulated by DOT.

[29] National Conference of State Legislatures, *Hazardous Materials Transportation: A Legislative Guide* (Washington, DC: February 1984), p. 36.

**Research and Special Programs Administration reports for 1976 through 1984 included 79,257 incidents resulting in $144,751,240 in damage. OTA calculations adjust this to 178,683 incidents resulting in $1.47 billion in damage for the 9-year period.

[30] Sherwood Chu, Deputy Director, Office of Hazardous Materials Transportation, Research and Special Programs Administration, U.S. Department of Transportation, personal communication, March 1986.

OTA analyses of flow and accident data indicate that relatively few of the HMIS data can be used as indicators, and that a major accident in any single year or on any mode can skew the data significantly. However, **when combined, current Federal accident and release databases provide more comprehensive information on the dimensions of hazardous materials transportation safety problems.** Data results from HMIS that appear to be reliable and are corroborated by other sources include the following:

- the majority of the releases occurred on the highway mode, and most occurred during loading and unloading, rather than over the road;
- corrosive substances have the highest accidental release rate;
- gasoline truck accidents and releases are the most numerous and cause the greatest dollar damage; and
- human error, including speeding and other basic traffic violations, is the leading cause of releases and accidents.

Since trucks carry more hazardous tonnage annually than all other modes together, and there are many more trucks than other vehicles or vessels, the preponderance of truck-related releases is not surprising. A California study, being conducted for the State legislature, compared three separate databases and determined that at least 500 releases occur annually on the State highway system alone, excluding the city streets. Furthermore, the study showed that driver-related factors were the most significant contributory causes in over 50 percent of the accidents.[11] These results imply that addressing issues such as driver qualifications, training, and performance is essential for safety improvements.

In addition, the data show that reported accidents involving hazardous materials more frequently involve common carriers than private carriers and that they occur more often in Pennsylvania, Ohio, Illinois, and California than in other States. Memphis has the highest release rate for the air mode, reflecting the fact that it is a major air freight hub.

The intent of the HMTA clearly indicates the need for an adequate annual summary of the safety of hazardous materials transportation, making improvement to the HMIS an urgent issue. Congress could require DOT to extend accident reporting requirements to all hazardous materials spills over a certain threshold whether they occur during interstate or intrastate transport and regardless of mode. Furthermore, a coordinated national spill reporting center, with reporting procedures and common data report fields that must be implemented by all Federal agencies, could be designated. The DOT National Response Center or the HMIS staff at RSPA provide natural homes for this coordinating role. Moreover, if formats including common data fields were decided on, accident reports collected at the State level could be submitted periodically to the regional DOT or EPA office. The regional Federal offices could provide annual updates to the national center. Several regional EPA offices already work with the States in their regions and have good computerized reporting systems. Reporting requirements need to be more strictly enforced, and release reports should be cross-checked at the regional level for accuracy and completeness before being submitted to a national data-collection center.

---

[11] Linda Turnquist, Analyst, California Transportation (CALTRANS), personal communication, March 1986.

DOT could be required to document, in its annual reports to Congress on the transportation of hazardous materials, accidents by State, container types, mode, and cause. Activities now underway at DOT to improve the RSPA spill report, Form 5800.1, and to coordinate with modal administrations to develop common data fields that are less open to subjective interpretation, should make the form reflect more accurately the causes and details of the spill. Congress might wish to require display in the DOT *Emergency Response Guidebook* of the toll-free number for the national report center as the place to call for reporting accidents.

Containers

The Federal regulatory standards for containers used to ship hazardous materials are comprehensive, requiring that the packaging be adequate to prevent release of its contents during transportation. Indeed, standards for containers for highly radioactive materials are set to ensure the packages withstand severe accident conditions without a dangerous radioactive release. To determine the adequacy of the containers used for transportation, OTA studied the accident and release records for the containers, the modal characteristics affecting the choice of containers, and the regulations governing them. The examination included the unique container issues associated with the transportation of radioactive materials, including spent nuclear fuel, as well as packaging for more familiar hazardous materials such as chemicals, petroleum products, explosives, and poisons.

Containers for Radioactive Materials, Especially Spent Nuclear Fuel

About 2.8 million packages of radioactive materials are shipped annually, representing between 2 and 3 percent of the Nation's annual hazardous materials shipments. About two-thirds of these shipments are for medical purposes, with the balance for industrial and research activities and the nuclear fuel cycle.*[32] About 7 percent of all shipments are classified as wastes, with the vast majority being low-level wastes.[33]

While the primary Federal regulatory responsibility for shipments of radioactive materials lies with DOT, NRC and DOE also have specific responsibilities. Under its authority, DOT has issued regulations covering all aspects of transporting radioactive materials, including the containers, the mechanical condition of the transportation vehicles, and the training of personnel, as well as the routing requirements, package labels, vehicle placards, and shipping papers.

---

*Shipments associated with nuclear power account for one-twentyfifth of all packages of radioactive materials shipped annually.

[32] Harold S. Javits, et al., *Transport of Radioactive Material in the United States*, SAND84-7174 (Albuquerque, NM: Sandia National Laboratories, April 1985).

[33] U.S. Environmental Protection Agency, "Sources, Amounts and Characteristics of Low-Level Radioactive Solid Wastes," *Low-Level Radioactive Waste Management*, EPA 520/3-79-002 (Washington, DC: May 1979).

Under a Memorandum of Understanding, NRC and DOT cooperate to regulate containers for radioactive materials. NRC, under its own legislative authority, is responsible for regulating, reviewing, and certifying the packaging and certain transportation operations for shipments of fissile and radioactive materials that must be packaged in very secure packages, called Type B containers, when such shipments involve NRC licensees.[34]

DOT sets regulations for all other packaging for radioactive materials in consultation with NRC. NRC approval of routes is required for shipments needing physical protection during transport to prevent theft or sabotage, but the routes chosen must be compatible with DOT regulations.

---

[34] "Transportation of Radioactive Materials: Memorandum of Understanding," *Federal Register*, vol. 44, No. 128, July 2, 1979. Among the 23,000 Nuclear Regulatory Commission licenses are manufacturers and users of radiopharmaceuticals, oil exploration companies, and nuclear utilities and their supply industries.

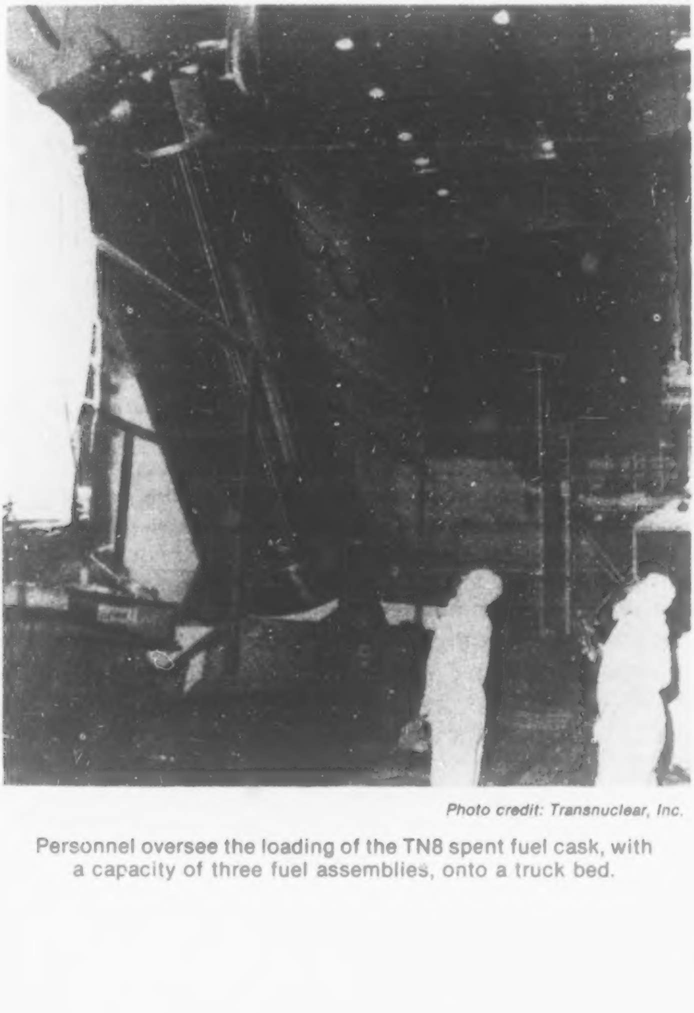


Photo credit: Transnuclear, Inc.

Personnel oversee the loading of the TN8 spent fuel cask, with a capacity of three fuel assemblies, onto a truck bed.

DOE has authority under DOT regulations (49 CFR 173.7) to approve the packaging and certain operational aspects of its research, defense, and contractor-related shipments of materials requiring Type B packages, although DOE is required to use standards and procedures equivalent to those of NRC. **It is in the procedural areas and instances where DOE has chosen to exercise its authority to use containers and procedures other than those certified by NRC that the greatest conflict between DOE and the States has arisen.** For example, officials from New York and New Jersey were outraged to learn in July 1985 that DOE had planned to use a cask that had not been certified by NRC for nuclear waste shipments from Brookhaven National Laboratories on Long Island.

Finally, DOD has separate authority for its radioactive shipments, similar to that of DOE. Three different Federal agencies thus can set standards for shipments of highly radioactive materials; two of them are shippers as well.

U.S. regulations for containers used for radioactive materials transportation are based on internationally accepted performance standards. International regulations and standards divide the materials to be shipped into three categories, based on their radioactivity levels:*

- low hazard or very low levels of radioactivity requiring "strong tight" containers,
- somewhat higher levels of radioactivity requiring secure containers called "Type A" packages, and
- fissile materials and those with very high levels of radioactivity requiring exceptionally durable containers called "Type B" packages.

Federal regulations limiting the radioactive contents for the commonly used strong tight and Type A containers are set on the assumption that the containers might break open in an accident and release some of the contents. In contrast, Type B packages are required to be sufficiently strong to withstand severe accident conditions, thus providing for safety largely independent of procedural and other controls on the shipment. To assure that Type B packages are adequately designed, constructed, handled, and loaded to protect public health and safety, NRC must approve and certify container designs and make certain that quality assurance procedures are implemented for their manufacture, operation, and maintenance. A summary of radioactive materials and packaging types appears in box 1A.

While Type B packages are the first and most important device for public protection, additional regulations and requirements for transportation of spent fuel have been developed. NRC monitors the quality assurance programs of its licensees and requires operational checks, such as leak tests, for the containers prior to each use. NRC checks for compliance with regulations at its licensees' facilities, and its inspectors are on hand to monitor the beginning of any spent fuel shipping campaign. The stringency of NRC inspection and monitoring depends on the inspectors' judgment and confidence in the shipper's quality assurance programs, training procedures and thoroughness in fol-

---

*International Atomic Energy Agency Safety Series 6, 1985, now contains a fourth category called "surface contaminated object" which is under consideration to become a U.S. category.

Box A.—Radioactive Materials and Packaging Types

Packages for radioactive materials are chosen based on the form of the material shipped and the degree of radioactivity of the material. There are two forms: normal-form and special-form. Most materials are classified as normal-form. These are not highly radioactive, and although they constitute about 87 percent of all radioactive packages shipped annually, they include only 10 percent of the curies. Special-form materials are generally encapsulated solids that present a hazard due to direct external radiation if they escape from the package. Although they constitute only about 13 percent of all radioactive packages, they encompass about 90 percent of all the curies shipped annually.[1] However, special-form solid material is not readily dispersible and has high physical integrity, and thus poses relatively little risk from inhalation or ingestion. The quantity of radioactivity in the material is indicated by four subdivisions: excepted or limited quantity, low specific activity, Type A, and Type B.

Excepted material is that which is so low in radioactivity that the hazards are negligible, and the materials can be shipped without special packages, shipping papers, or labels. Examples of such materials include smoke detectors, static elimination brushes, lantern mantles, luminous watch dials, and luminous exit signs. Excepted materials are regulated by the Department of Transportation (DOT).

Low specific activity (LSA) material is that in which the specific radioactivity is sufficiently low that the radiological hazard presented by inhalation or ingestion of the material is very small. LSA materials include such things as uranium mill tailings, uranium ore, natural uranium hexafluoride, some low-level wastes, and most laboratory and medical wastes. LSA materials must be contained in strong and tight packages which permit "no leakage of radioactive material under conditions normally incident to transportation." Wooden boxes, 55 gallon drums, and special tank trailers fit this criteria. Containers for LSA materials are regulated by DOT in consultation with the Nuclear Regulatory Commission (NRC). Some LSA materials, such as spent resins from reactors, are required to be packaged in NRC-certified Type A packages.

Type A packaging is intended to prevent the loss or dispersal of its contents when subjected to a specified set of "normal" transportation conditions. The conditions are actually more severe than the "normal" label implies. Most radiopharmaceuticals for medical uses are packaged in Type A containers, as are radioassay materials used in research and medicine, and some wastes associated with reactor operation. Type A containers are regulated by DOT in consultation with NRC.

Type B packaging requirements are the most stringent. Type B containers are employed for the larger quantities and high-level radioactive materials. Type B packages are required for most fissile materials, spent fuel, highly radioactive waste, irradiated components, radioactive sources for medical therapy, industrial radiography sources, highly contaminated equipment, and power sources for pacemakers. Type B "overpacks" are frequently used for shipping many Type A packages when additional protection is required. NRC regulations contain the standards for Type B containers and certifies the designs used in their construction. DOT regulations allow the use of either the U.S. Department of Energy or NRC-certified Type B and fissile packages in commerce.

---

[1] Harold S. Javitz, et al., *Transport of Radioactive Material in the United States*, SAND84-7174 (Albuquerque, NM: Sandia National Laboratories, April 1985).

BEST AVAILABLE COPY

lowing procedures.[55] NRC also conducts routine transportation checks for compliance with regulations, and in the period from July 1983 to June 1985, inspected more than 300 shipments of spent fuel.[56] As an added precaution, some States through which spent fuel shipments pass require inspection of shipments by State personnel as well.

NRC also requires that the governors of affected States be notified in advance of commercial shipments of spent fuel and certain other highly radioactive materials. The information must include the shipper's name, a description of the material, and estimates of times of arrival at State boundaries. DOE notification procedures are much less explicit, and friction with many States has resulted from this departure from NRC procedures. Moreover, certain shipments that involve national security are exempt from the prenotification requirement.

Both DOT and NRC have the authority to impose fines for violations of regulations. However, the efficacy of the enforcement efforts of both agencies has been the subject of severe criticism. The level of NRC inspection is less a concern than the reliance placed on the judgment of individual inspectors and shipping company personnel. The process provides few outside checks,[57] a situation which under adverse circumstances could have potentially disastrous consequences.[58] Quality control during cask construction, maintenance, and operational checking, and vehicle operations during loading, transportation, and unloading requires vigorous, constant scrutiny to minimize risk and chances of an accident due to human error.

Because shipments of spent fuel, which are made by both rail and trucks, are of special public concern, Congress expressed particular interest in the adequacy of the regulatory standards that must be met by Type B containers. OTA analyzed these standards and shipping procedures in detail. Such shipments represent less than 0.001 percent of the total number of annual hazardous materials shipments, and the probability of an accident involving spent fuel is very low. The potential consequences must be based on technical estimates since no actuarial record exists for such an accident. Currently, somewhere between 100 and 300 shipments of spent fuel occur annually, as utilities shift stored spent fuel from filled cooling pools at one site to other storage pools, or as industry and DOE or DOD move fuel either for storage or research.

Type B Containers for Spent Fuel

The basic criteria for Type B packages, established in 1946 based on recommendations by the National Academy of Sciences, have been adopted by the International Atomic Energy Agency and 53 nations. Current NRC regulations provide a set of performance criteria for the packages, rather than specific design requirements. These remove the need to predict specific accident circumstances and provide a set of engineering test specifications for impact, puncture, temperature, immersion, and leak tightness that encompass the types of conditions that could occur in an accident.

---

[55] C. MacDonald in U.S. Congress, Office of Technology Assessment, "Transcript of Proceedings—OTA Workshop on Nuclear Materials Packaging Technology," unpublished typescript, Feb. 8, 1985, p. 142.

[56] Alfred Grella, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, "NRC Inspection Activities on Recent Shipments of Spent Fuel 1983 to Present," unpublished typescript of speech presented at the Spent Nuclear Fuel Transportation Seminar, Chicago, IL, Aug. 1, 1985.

[57] Union of Concerned Scientists, *Safety Second: A Critical Evaluation of the NRC's First Decade* (Washington, DC: February 1985), ch. 4, especially.

[58] Ibid., p. 155.

The most widely recognized Type B containers are the casks for transporting highly radioactive, spent nuclear fuel. Current casks are 10 to over 20 feet long and are constructed of two concentric, welded, stainless steel shells, each typically 1 to 2 inches thick, enclosing a gamma radiation shield of lead or depleted uranium metal and water or other hydrogenous material as a neutron radiation shield. These casks were designed to contain and ship spent fuel that had been removed from the reactor 4 to 5 months previously and that was still relatively radioactive. Potential technical improvements to the casks are examined as a normal part of international research and development and have been a focus of DOE- and NRC-funded research over the years.

The NRC cask certification process is, of necessity, painstaking and time-consuming. The proven safety record of NRC-certified casks, however, provides a degree of public confidence in casks. **OTA finds that technical evidence and cask performance in service indicate that NRC performance standards yield spent fuel shipping cask design specifications that provide for a very high level of public protection—much greater than that afforded in any other current hazardous materials shipping activity. However, meticulous adherence to the designs and specified procedures during cask manufacture and to required safety procedures during loading and transport are critical factors in ensuring public and environmental safety.** Transportation accidents involving shipments of spent fuel will inevitably occur. However, OTA concludes that the probability of an accident severe enough to cause extensive damage to public health and the environment caused by a radiological release from a properly constructed cask is extremely remote. **OTA further finds that fruitful areas for improvements in the overall safety of spent fuel transportation are to be found in the institutional, procedural, and operational controls and arrangements, such as quality assurance and quality control measures; maintenance activities; operator, handler, and driver training; and inspection.**[39]

Finally, OTA finds that continued research is needed in certain technical areas to determine where safety improvements could be effective. Such research needs include: the interface between the carrying vehicle and the casks, such as tiedowns and fasteners; additional and ongoing evaluation of real accident stresses as compared to those specified by the current regulations; and methods of extending accident modeling capabilities to encompass accidents more severe than those currently incorporated in the models.

---

[39] This aspect was a persistent theme in both the OTA workshop and advisory panel meetings; see for example Richard Cunningham, Nuclear Regulatory Commission, in U.S. Congress, Office of Technology Assessment, "Transcript of Proceedings—Transportation of Hazardous Materials Panel," unpublished typescript, June 27, 1985, p. 230.

Future Spent Fuel Shipments Under the Nuclear Waste Policy Act

Under the provisions of the Nuclear Waste Policy Act (NWPA) of 1982, DOE will take title to spent fuel from commercial utilities and be responsible for its movement, storage, and disposal, starting in 1998. DOE has established the Office of Civilian Radioactive Waste Management to plan and prepare for these activities.

As there will be some 90,000 spent fuel assemblies in U.S. spent fuel pools by that time,[40] DOE may be responsible immediately for a number of shipments to a repository or monitored retrievable storage facility. Depending on the type and carrying capacity of the casks ultimately constructed and certified for these shipments, DOE estimates that approximately 250 rail and 725 truck shipments will be required annually to move spent fuel from reactors in the eastern half of the country to a monitored retrievable storage facility or repository.[41] For NWPA shipments, DOE has agreed to meet DOT and NRC safety and security requirements in effect at the time and will use only transportation casks that have received an NRC certificate of compliance.[42]

A new generation of casks is being designed and tested and will be employed to move spent fuel to a national repository under NWPA. Although they must meet the same performance standards as current casks, the new casks are likely to have somewhat different physical characteristics from those of the current casks, because they will be designed to hold older, less radioactive spent fuel. It is thus likely that the next generation of casks will carry the maximum possible number of spent fuel elements within weight and safety limits, to reduce the number of shipments necessary. Innovations in materials and design have yielded nodular cast iron and monolithic steel casks now used in Europe. Some of these designs have been submitted to NRC for certification and are undergoing testing.

DOE is also examining the possibility of employing very large capacity dual-use casks; these offer an opportunity to minimize both the number of shipments and the handling of the spent fuel. Once the fuel has been removed from the reactor and placed in dry, onsite storage in these dual-use casks, the handling and worker-exposure risk would be reduced if the same casks could be used to transport the spent fuel to a repository. However, the NRC-specified test conditions for casks used for transportation are more stringent than those for storage casks, and although NRC has pending applications for certification of two such casks, none has yet been certified for both purposes.[43]

---

[40] George Russ, Atomic Industrial Forum, Bethesda, MD, personal communication, 1985. See also U.S. Congress, Office of Technology Assessment, *Managing the Nation's Commercial High-Level Radioactive Waste*, OTA-O-171 (Washington, DC: U.S. Government Printing Office, March 1985), p. 28.

[41] U.S. Department of Energy, "Environmental Assessment for a Monitored Retrievable Storage Facility," *Monitored Retrievable Storage Submission to Congress*, vol. 2, RW0035, review copy, unpublished manuscript, p. 2.23.

[42] U.S. Department of Energy, Office of Civilian Radioactive Waste Management, Office of Storage and Transportation Systems, "Transportation Institutional Plan," unpublished internal review draft manuscript, Mar. 3, 1986, pp. 3 and D-57.

[43] U.S. Department of Energy, Office of Civilian Radioactive Waste Management, *Annual Report to Congress*, DOE/RW-0004/2 (Washington, DC: March 1986), p. 23.

Moreover, questions will need to be answered about the effects of lengthy onsite storage on the casks' integrity during transportation and on the effects of the large, heavy casks on the stability of the carrying vehicles, whether truck or railcar. The weight would not be a concern if barge transportation were used, but the increased turnaround time required for reusable casks by slower barge travel is an economic trade-off that must be considered.

OTA concludes that once the new casks for NWPA shipments have been developed, and have met NRC certification requirements, full-scale demonstration tests could assist in gaining a level of public confidence. So that their concerns are addressed, organizations and individuals critical of the current transportation procedures should be included in planning for a test. An extensive public information program would be important prior to the test to help affected Indian tribes, public officials, citizens, and safety and emergency personnel understand, to the degree possible, the technical background for the test.

However, considering the technical complexities of the issues, it is wise to be realistic about the extent to which a full-scale cask accident demonstration would increase public understanding. A well-planned, constructed, and staged full-scale demonstration could prove persuasive to many, but no accident demonstration can show all the possible events for all conceivable accidents.[44]

Currently, relations between and among Federal agencies, the nuclear container industry, the nuclear power industry, and State and local governments are strained, as the country struggles to come to grips with the need to dispose of nuclear wastes in a safe manner. The level of public apprehension about shipments of spent fuel requires carefully coordinated programs to address public concerns. Sensitivity to public concerns and programmatic coordination have heretofore not been outstanding at DOE, which will be responsible for NWPA shipments. The technical specifications for the shipping casks are difficult to explain and comprehend, and the stringency of the standards for ensuring spent fuel cask integrity is easily misunderstood. Industry and government will do well to address such apprehensions in a forthright manner. In the meantime, Congress might wish to require DOE to reduce one area of public concern by agreeing to begin using NRC-approved casks and notification procedures immediately for its unclassified shipments. **OTA finds that the parts of the nuclear waste transportation process most in need of change are the institutional attitudes of DOE and NRC and their interactions with the State and local governments and the general public. Comprehensive public information efforts are necessary to address concerns about the level of safety provided by Federal regulations and cask specifications.** Public participation, outreach, and information activities undertaken by the utilities that ship spent fuel regularly provide useful models for programs that DOE, as a future shipper, could develop.

State, local, and Indian tribal officials want to be full partners with the Federal Government in the NWPA transportation planning and decisionmaking process. In November 1985, DOE sponsored a workshop for State, tribal, and local officials to determine the extent and specific nature of their concerns about DOE's plans for shipments of spent fuel under NWPA. Such activities provide a forum for airing and moving toward resolution of conflicts. **OTA concludes that additional meetings, sponsored jointly by DOT, NRC, and DOE, in cooperation with public interest groups, such as the National Governors' Conference, the National Conference of State Legislatures, the International Conference of Mayors, and the National League of Cities, are essential to informing the public and improving intergovernmental coordination.**

---

[44] U.S. Congress, Office of Technology Assessment, "Transcript of Proceedings—OTA Workshop on Nuclear Materials Packaging Technology," op. cit., p. 81.

Containers for Hazardous Materials

The packagings or containers used for shipping hazardous materials include tank trucks, railroad tank cars, and barges, as well as bottles, boxes, and drums. They are important factors in transportation safety. RSPA is responsible for issuing packaging and hazard communication regulations for all hazardous materials containers except bulk marine containers, which are regulated by the U.S. Coast Guard, and packaging for highly radioactive materials, for which regulations are developed by NRC.

DOT regulations apply to hazardous materials containers of all sizes, with requirements generally different, depending on whether the material is shipped in bulk or in small packages. DOT marks the dividing line between small (nonbulk) and bulk containers at 110 gallons or 1,000 pounds. Small packages of hazardous materials are carried by water, rail, highway, and air in approved packagings including drums, cylinders, boxes, cans, and bags. Bulk packages generally do not travel by air.

OTA's research shows that hazardous materials packaging generally has been adequately designed. Although there are some problem areas, industry often uses containers more sturdy than required by DOT regulations for very high-hazard materials.

Bulk Packaging

Because accidents and releases in any mode have a common source—human error—the safety records for bulk transport by the highway, water, and rail modes differ, according to the opportunities for error in each mode. Thus, more accidents, spills, injuries, deaths, and property damage occur on highways than on rail or water, in both absolute numbers and accidents per ton-mile traveled,[45] and more occur on rail than on water on a ton-mile basis, due to modal differences in the miles of network, number of operators and individual shipments, traffic densities, and average speed.

Other factors affecting safety include: the extent of coverage by and enforcement of Federal safety regulations for the vessel or vehicle; the amount and quality of training the vessel or vehicle operators and loaders receive; the frequency of maintenance and inspections of the vessel or vehicle; and finally, the coordination between the agencies responsible for regulation, inspection, and enforcement activities. Table 6 presents a comparison of modal characteristics for bulk shipping of hazardous materials.

---

[45] A ton-mile is the product of the tons of material carried and the distance carried in miles. For example, a truck with a load of 20 tons that traveled 100 miles would have logged 2,000 ton-miles. Ten trucks each carrying 2 tons and each traveling 100 miles would also have logged 2,000 ton-miles in the aggregate (each truck logging 200 ton-miles).

Bulk equipment has a useful life of 20 to 30 years, although maintaining bulk vessels, tank cars, and trucks to high standards can become expensive after the first decade. Because of this long life span, there is little incentive for industry innovation. Changes to the regulations take years to implement, both because the industries involved are economically hard pressed and do not welcome potentially costly changeovers, and because at least two DOT agencies are involved in the decisionmaking process. In times of economic turmoil, such as the transportation industries are now undergoing, fleets may age and deteriorate.

Of the three modes of bulk hazardous materials transport, the highway mode is the most versatile and widely used, carrying over 55 percent of the annual total hazardous materials tonnage. (See table 1.) The nature of the bulk trucking business is different from that of the rail or water modes of bulk transport in that there are many more carriers of a wider variety, and many businesses are much smaller than those typically found in the rail or water mode. The carriers include private interstate carriers; large interstate common and contract carriers; and small common, contract, and private intrastate carriers.*

Tank trucks (or cargo tanks) are the main highway carriers of bulk hazardous materials. Usually made of steel or aluminum alloy, tank truck capacities range from about 2,000 to 9,000 gallons depending on the density, vapor pressure, and corrosiveness of the cargo. In some States, however, which allow higher gross weights, tank trucks may carry up to 13,000 gallons, sometimes in double tanks. Table 7 lists the main contemporary cargo tanks built to DOT specifications and examples of commodities each of them may carry. Older tank trucks built to outdated specifications may still be used to carry hazardous materials, but all newly constructed tank trucks must meet current specifications. These prescribe the thicknesses of the bodies of the tanks, pressure relief devices, manhole covers, gauging devices, overturn protection, pressure test methods, and the like.

Turnover of equipment is slow, and cargo tanks generally go through several tiers of owners. Large private interstate carriers, often large petrochemical companies, have the resources to purchase new equipment and maintain it well. They use their trucks around the clock, 6 to 7 days a week and find it economical to retain tank trucks in their fleets for only 8 to 10 years. Maintenance costs to keep the vehicles up to their standards then become sufficiently high that they sell the trucks to a common carrier or to a jobber and buy new equipment.[46] In contrast, the average tank truck in the fleet of one of the

---

*Private carriers transport commodities that they own, and the transport is integral to their business. Common carriers are transporters of freight for compensation; common carriers must accept all traffic tendered to them that is within their operating authority (to the extent that they have equipment and drivers to do so). Contract carriers are transporters of freight by motor vehicle for compensation in the exclusive service to one or more specific shipper(s) as authorized by duly constituted Federal or State authority. This classification includes owner-operators under long-term lease to certified carriers.

[46] Clifford Harvison, National Tank Truck Carriers, and E.E. Eigenschenk, Shell Oil Co., personal communications, 1985.

Table 6.—Modal Characteristics of Bulk Shipping of Hazardous Materials

	Highway	Rail	Water
Containers regulated by DOT[a]	Most	All	All
Inspection or testing frequency	Upon manufacture[b]	Upon manufacture plus every 5-10 years[c]	Yearly[d]
Commodity flow data[e]	Very little	Nearly complete	Complete
Regulators and inspectors*	RSPA, BMCS, NHTSA[f]	FRA, RSPA, AAR[g]	USCG, RSPA[h]
Fleet size	130,000 cargo tanks[i]	115,600 tank cars[j]	4,909 tank barges[k]
Fleet database[l]	Partial (BMCS)	Yes, complete (AAR)	Yes, complete (ACofE)
Number of operators[m]	260,000	26,000	45,000
Size of load (gals)	4,000-12,000	10,000-30,000	300,000-600,000

*See table 4 for numbers of inspectors.

[a] Federal regulations cover the transportation of hazardous materials by railcar, aircraft, vessel, and interstate transportation by motor vehicle. Intrastate highway transport of hazardous wastes, hazardous substances, and flammable cryogenics in portable tanks or cargo tanks is also covered (49 CFR 171.1). Unless a State has specifically brought intrastate commerce under regulation, containers in such service need not meet any standards. The Department of Transportation does not know the precise extent to which the States have extended the Federal regulations to intrastate commerce. Most gasoline transport by truck is intrastate and these shipments are a large percentage of the total hazardous materials shipments.

[b] Cargo tanks must undergo an external visual examination every 2 years but generally do not have to be leak tested or pressure tested. However, cargo tanks carrying chlorine must be pressure tested every 2 years and tanks carrying compressed gas (e.g., liquefied petroleum gas) must be pressure tested every 5 years, cargo tanks for flammable cryogenics are inspected prior to each loading. Most tanks, however, are not leak or pressure tested after they are built unless they have been out of service for a year or more, had repairs or modifications performed on them, are operating under an exemption to the regulations, or are used in an area of nonattainment of Clean Air Act standards for ozone. (49 CFR 177.824.)

[c] Tank cars carrying some cargoes are tested more frequently. For example, tank cars carrying chlorine must be tested every 2 years. Also, the frequency of inspection of some tank cars increases to once per year after they are 22 years old. General American Transportation Corp., *GATX Tank Car Manual, 4th Edition* (Chicago, IL: 1979).

[d] 46 CFR 31.10-15, and 31.10-17.

[e] Data on the identity and amount of hazardous materials shipped over the highways is collected by the Bureau of the Census every 6 to 7 years, however the quality and comprehensiveness of the data is poor. Records of 80 percent of all rail traffic are kept by the Association of American Railroads (AAR). A record of 1 to 6 percent of all rail traffic is kept by the Interstate Commerce Commission. Records of all origins and destinations of hazardous material cargo that travel on U.S. waterways are kept by the U.S. Army Corp of Engineers (ACofE).

[f] The Research and Special Programs Administration (RSPA) develops and publishes regulations on the cargo tanks. The Bureau of Motor Carrier Safety (BMCS) regulates in-use motor vehicles and drivers, and enforces regulations pertaining to the manufacture, marking, repair, etc., of cargo tanks. The National Highway Traffic Safety Administration (NHTSA) has responsibility for the original manufacture of the vehicle.

[g] AAR establishes the basic technical specifications for tank cars and their running gear. After public rulemaking and comment, RSPA adopts the final specifications in the regulations. Both AAR and the Federal Railroad Administration (FRA) inspect tank cars in rail service. Both AAR and FRA inspect tank manufacturers.

[h] For bulk vessels (tank ships and tank barges), the United States Coast Guard (USCG) establishes the regulations, performs the inspections, administers licenses, and specifies the design of vessels. RSPA sets the standards for intermodal portable tanks that can be carried on container ships and barges.

[i] Estimates from the 1977 Truck Inventory and Use Survey. Of these, 38,000 carry hazardous materials 25 to 49 percent of the time, 14,000 carry them 50 to 74 percent of the time, and 67,000 carry them 75 to 100 percent of the time.

[j] Written communication with AAR. This is about 60 percent of the total number of tank cars.

[k] American Waterways Operators. This is the number of inland tank barges, most of which carry hazardous materials. There are also a small number of ocean going barges and tankers that carry hazardous materials, but tank barges are responsible for most inland traffic.

[l] While the Army Corp of Engineers (ACofE) keeps track of the number of active and inactive vessels that may carry hazardous materials in U.S. commerce, and the AAR's UMLER file lists all tank cars by DOT specification that are in service, there is no comparable database for the highway mode. Although individual companies know how many and what types of cargo tanks or intermodal portable tanks they have, no single agency has an accounting of all bulk highway vehicles nationwide.

[m] "Operator" refers to the vehicle or vessel "driver." The number of people driving cargo tanks (carrying hazardous materials) is estimated by assuming there are two drivers per cargo tank. Large interstate private carriers often have three or more drivers per vehicle, while other carriers typically have fewer. Information on the rail mode was obtained from AAR and on the water mode from USCG. The number presented in the water mode represents all those licensed by USCG to operate commercial vessels, most of these would not routinely be involved with hazardous materials.

SOURCES: Unless otherwise indicated in footnotes, Office of Technology Assessment, based on information from participants of workshops and panel meetings or comments to draft reports by the affected parties.

Table 7.—Cargo Tank Table

Cargo tank specification number	Types of commodities carried	Examples
MC306	Combustible and flammable liquids of low vapor pressure	Fuel oil, gasoline
MC307	Flammable liquids, poison B materials with moderate vapor pressures	Toluene diisocyanate
MC312	Corrosives	Hydrochloric acid, caustic soda solution
MC331	Liquefied compressed gases	Chlorine, anhydrous ammonia, LPG
MC338	Refrigerated liquefied gases	Refrigerated liquid, oxygen Refrigerated liquid, methane

SOURCE: 49 CFR 172.101 and 178.315 to 178.343

country's two largest common carriers is now 12 years old, because economic competition is so fierce that, unable to afford major expenditures, companies are keeping their equipment longer. A second tier owner uses a tanker until it becomes uneconomical and then sells it to yet another owner. **This process continues despite the truck's inevitable deterioration, partly because Federal hazardous materials regulations do not generally apply to intrastate motor carrier transport.**[47]

OTA's analysis shows that cargo tank trucks transporting gasoline, about 49 percent of all hazardous materials transported by tank truck, are involved in accidents resulting in more deaths and damages than all other hazardous materials accidents combined. Trucks carrying chemicals represent about 20 percent of tank truck transport of hazardous materials. Of the chemicals, corrosive cargos have the highest accidental release rate per ton-mile[48] and exert the greatest wear and tear on tank trucks. In fact, one safety director told OTA that his acid tanks were ". . . junk after 4 years."

Problems with all varieties of cargo tanks have been studied by DOT over the past 10 years. Study results show that many of the releases from cargo tanks come from discharge valves, pressure relief valves, and manhole covers, and that poor maintenance and inspection of the tanks contribute to the problems. Many parts of a rulemaking proposed by DOT in September 1985 address these shortcomings.[49] **OTA finds that adoption of the proposed changes calling for stringent and more specific manufacturing standards, annual leak testing of all cargo tanks, and stronger manhole covers on gasoline tankers, will improve the performance of cargo tanks.** These actions, while not calling for significant redesign, nonetheless directly address many of the inadequacies uncovered in the DOT studies.

---

[47] Hazardous wastes, hazardous substances, and flammable cryogenics, and nuclear materials regulated by the Nuclear Regulatory Commission, are the only hazardous materials regulated by the Federal Government regardless of whether the commerce is intrastate or interstate, see 49 U.S.C. 173.

[48] Abkowitz and List, op. cit.

[49] "Notice of Proposed Rulemaking, Requirements for Cargo Tanks," *Federal Register*, U.S. Department of Transportation, Research and Special Programs Administration, Materials Transportation Bureau, Sept. 17, 1985.

Moreover, if registration were required at the time of manufacture of each tank truck built to hazardous materials specifications, subsequent inspections could provide a means of identifying and tracking equipment design and maintenance problems. Release and accident data for the highway mode would be more useful if information regarding container type and primary commodity carried were acquired at the time of registration. Such records are currently kept for bulk marine vessels and railroad tank cars.

Since the early 1980s, when railcars carrying certain hazardous materials began to be equipped with shelf couplers, thermal insulation, and head shields, no catastrophic hazardous materials rail accident has occurred, although there have been numerous accidents and releases. OTA's data analysis shows that corrosives have the highest accident and release rate for commodities carried by rail. Many corrosives such as sulfuric acid and caustic soda are carried in tank car type 111A—the tank car type appearing most frequently in the HMIS. OTA concludes that research to address this issue is important. OTA did not make a detailed study of bulk marine vessels, and the data analysis did not indicate technical problems with bulk marine vessels warranting urgent attention.

OTA finds that countermeasures to address nontechnical issues are important for all modes. Special operator training specifically related to hazardous materials, and training for shipper and carrier personnel responsible for loading and unloading, fastening, blocking, and bracing nonbulk loads, could increase safety substantially. **Congress might consider mandating the development of specific training guidelines, through a consensus process utilizing shippers, carriers, and freight forwarders, as well as government safety personnel, to take advantage of existing expertise and resources.**

Intermodal Containers

Intermodal (IM) tanks are metal containers that hold 4,000 to 6,000 gallons and are surrounded by a metal protective frame that can lock into special fittings on a truck chassis, a railcar, or in a ship's hold or airplane cargo bay. They are versatile and efficient containers for substances that must travel long distances by several different modes. The United States has very few manufacturers of IM tanks, but rapidly growing numbers of these tanks are being transported into and around this country, often over three different modes in a single trip, as international trade increases. The tanks must be registered by serial number with DOT, but regulatory responsibility for them and their carrying vehicles is shared between RSPA and the modal administrations. The poor interagency coordination at DOT is a particularly acute problem for adequate regulation of the transport of these vessels.

The specific areas of concern are the types of chassis used and the method(s) of securing IM tanks onto truck chassis. DOT regulations permit securing the frame of an IM tank to a flatbed truck chassis with chains and hooks called J hooks—a fastening method of questionable reliability, as accident records are beginning to document.

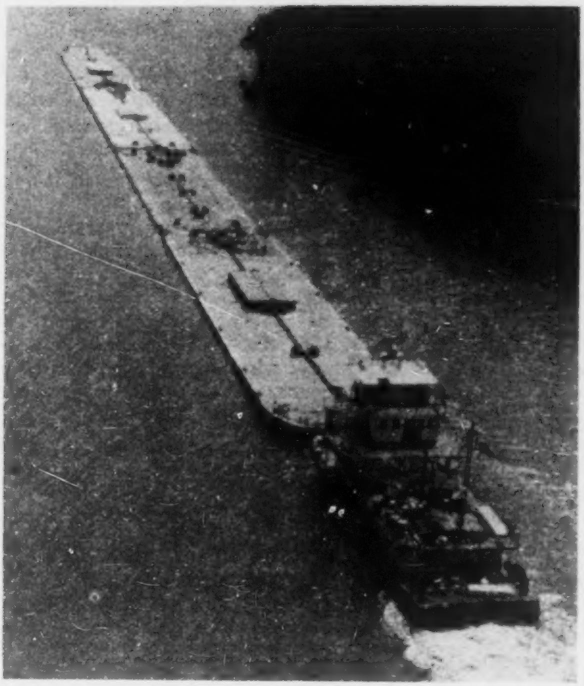


Photo credit: American Waterway Operators

Approximately 35 percent of the hazardous material tonnage transported in 1982 was waterborne.

Few appropriate truck chassis for intermodal tank containers are available in the United States. Most of the chassis available in this country are deficient either in length, securement devices, or overall design, which typically incorporates a high center of gravity. Loaded portable tanks must be carried on 40-foot chassis in order to comply with bridge laws that limit the vehicle weight per axle and per wheelbase. However, only about 400 40-foot chassis in this country have twist locks that positively secure the portable tank to the center of the chassis, preventing lateral or vertical motion, although there are several thousand portable tanks available for commercial use.[50] Thus, most intermodal tank containers now travel by highway on 40-foot flatbed trucks secured by chains, or on 20-foot chassis, which often have proper securement devices, but which violate road weight laws.[51]

---

[50] George Graham, President, Chemical Leaman Container Corp., agents for Sea Containers Inc., personal communication, October 1985.

In addition, few chassis are specifically designed for intermodal tanks. A "lowboy" chassis, with a centered flatbed several feet lower than normal, lowers the center of gravity and makes the vehicle more stable. Such chassis are used throughout Europe, but there are fewer than 100 in the United States. **OTA finds that immediate and intensive study of the motor vehicle chassis and securement methods for intermodal portable tanks is urgently needed.** The research should be conducted jointly by RSPA, BMCS, and FRA. Congress might wish to require that intermodal tanks travel only on chassis that have twist locks that positively secure the tank against vertical or lateral motion as an interim step.

Small Packaging

Because of the limited amounts of hazardous material contained in small packages, releases generally do not have serious consequences. Release reports for small packages indicate that accidents occur more frequently through mishandling or misuse of the packaging, rather than because of container failure. Air carriers and the U.S. Postal Service reported to OTA that many problems arise from unwitting violations of regulations and mispackaged hazardous materials.[52] **OTA finds that stepping up public information programs and industry compliance training could improve safety.**

Accident and release data are so incomplete that thorough evaluation of the safety record of individual small package designs is impossible. Furthermore, the regulations that govern the packages are lengthy and complex, difficult to understand and follow, and out of harmony with those of our international trading partners.

Performance standards, already in international use for small packages, are likely to be adopted by DOT within the next few years, and the prospective changeover has been widely supported by most of the affected parties. **OTA finds that the new system will simplify the regulations making compliance with them easier, bring U.S. regulations into greater conformity with those of our international trading partners, and make packaging innovations easier and faster to evaluate and implement.** Adoption of performance standards should reduce the time required for the relatively small RSPA staff to handle exemption applications and free them for other functions such as data and trend analysis and planning.

OTA concludes that collection of release data for small packages needs to be improved and continued, so that packaging deficiencies can be identified and remedied, and the adequacy of the performance tests can be evaluated.

---

[51] George Graham, President, Chemical Leaman Contain Corp., agents for Sea Containers Inc., a major owner, leaser, and transporter of intermodal containers, has strongly advocated that intermodal tanks not be allowed to travel on flatbed trailers secured only by chains. Chains or chain binders allow for tank movement and make the vehicle dangerously unstable. His comments were made at the first semi-annual meeting of the Hazardous Materials Advisory Council, held at Hilton Head Island, SC, Nov. 14, 1985, and reported by Laurie Bradford in "Inexperience Poses Major Threat to Safety in Transport of 'HM,' " *Traffic World*, Nov. 25, 1985.

[52] Steve Gordon, U.S. Postal Service, personal communication, 1986.

Defining Roles and Coordinating Programs

Federal agencies with overlapping interests and responsibilities need to coordinate common activities and define transportation-related policies more explicitly. OTA has identified several areas where specific action would increase effectiveness.

Public concerns related to shipments of spent nuclear fuel are focusing on transportation procedures and safeguards in addition to the containers for spent fuel. Congress might consider requiring DOE, NRC, and DOT to work out notification, State container inspection and other operating procedures, routing, and safeguard policies for NWPA shipments in consultation with each other and in conjunction with State and local officials. **While DOT and NRC both have regulatory roles and DOE is an operating agency, the policies and activities of all three agencies have a single impact on public perceptions.** Moreover, DOT, DOE, and NRC might consider undertaking a joint public information program, using staff specially trained in discussing technical matters with audiences that have widely varying values.

OTA also found that interprogram coordination within DOE has been sadly lacking, although recently, efforts have been made to improve the situation. Staff in offices such as emergency response and transportation often did not know each other and were not familiar with each other's programs. Continued lack of coordination will hamper implementation of NWPA activities and any interagency cooperative efforts.

Finally, Congress could take steps to promote improved coordination within DOT and among Federal agencies. A standing coordinating committee, perhaps under the umbrella of the National Response Team, could be established with representatives from each DOT modal administration, RSPA, other Federal agencies such as EPA, NRC, DOE, and FEMA, State and local governments, and industry. This committee might be required to meet periodically to: define Federal agency missions and roles in the transportation of hazardous materials, coordinate Federal training programs, oversee the development of national guidelines (described above), set a regulatory agenda for intra-agency and interagency issues, and oversee the coordination of common activities such as data collection and enforcement.

Subgroups could be formed to address areas of particular concern. More specifically, DOT and EPA could be directed to develop a joint program to educate small businesses that generate and transport hazardous wastes about DOT transportation requirements and the compatibility of wastes and containers. With more than 60,000 small-quantity generators of hazardous wastes becoming subject to EPA and DOT regulations, the potential for confusion and use of inappropriate containers is immense.

Within DOT, intermodal agency groups could coordinate far more closely. RSPA could take a more aggressive role as DOT hazardous materials coordinator for research and data-collection programs, leaving modal operational details to modal administrations. Federal research on IM tanks is being done separately by modal administrations, when it is being done at all. FRA, for example, is conducting research on the dimensions of intermodal tanks on trailers and flatcars using truck chassis that violate over-the-road use in most States. Coordination for multimodal research is essential if the work is to be cost-effective. RSPA could act more effectively as coordinator between the Federal Highway Administration, BMCS, and FRA for this effort, to ensure that research results have practical value.

NOTE: Copies of the full report "Transportation of Hazardous Materials" can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, GPO stock No. 052-003-01042-9.

General Information

Contacts Within OTA

OTA offices are located at 600 Pennsylvania Ave., S.E., Washington, DC.

Personnel Locator	224-8713
Publication Requests	224-8996
Office of the Director	224-3695
Congressional and Public Affairs Office	224-9241
Energy, Materials, and International Security Division	226-2253
Health and Life Sciences Division	226-2260
Science, Information, and Natural Resources Division	226-2253
Administrative Services	224-8712

Reports and Information

To obtain information on availability of published reports, studies, and summaries, call the OTA Publication Request Line (202) 224-8996.

Information on the operation of OTA or the nature and status of ongoing assessments, write or call:

Congressional and Public Affairs Office
Office of Technology Assessment
U.S. Congress
Washington, DC 20510
(202) 224-9241

Other OTA Publications

List of Publications.—Catalogs by subject area all of OTA's published reports with instructions on how to order them.

Assessment Activities.—Contains brief descriptions of recent publications and assessments under way, with estimated dates of completion.

Press Releases.—Announces publication of reports, staff appointments, and other newsworthy activities.

OTA Annual Report.—Details OTA's activities and summarizes reports published during the preceding year.

OTA Brochure.—"What OTA Is, What OTA Does, How OTA Works."

Mr. **Anderson**. Could I interrupt here?

We're way past the second bell, and we have a couple of members who also haven't—unless Applegate hasn't finished his.

I'd like to recess at this time, go vote, and then break for lunch, and have the record so that Mr. Applegate, Mr. Gallo, and Mr. Gray, if they have any further questions, could submit them to you and your answers could be made for the record.

Mr. **Mineta**. That's satisfactory to me, Mr. Chairman.

Mr. **Anderson**. Okay.

[Additional questions were submitted to Ms. Page from Mr. Gallo. Questions and responses follow:]

DEAN A. GALLO
11TH DISTRICT, NEW JERSEY

PUBLIC WORKS AND
TRANSPORTATION COMMITTEE
SUBCOMMITTEES
WATER RESOURCES
SURFACE TRANSPORTATION

SMALL BUSINESS COMMITTEE
SUBCOMMITTEES
TRADE AND SPECIAL PROBLEMS
PROCUREMENT

REGIONAL WHIP

Congreſs of the United States
House of Representatives
Washington, DC 20515

WASHINGTON OFFICE
1118 LONGWORTH BUILDING
WASHINGTON, DC 20515
(202) 225-5034

DISTRICT OFFICES
101 GIBRALTAR DRIVE
SUITE 2-D
PARSIPPANY TROY HILLS TWP
MORRIS PLAINS, NJ 07950
(201) 984-0711

22 NORTH SUSSEX STREET
DOVER, NJ 07801
(201) 328-7413

3 FAIRFIELD AVENUE
WEST CALDWELL, NJ 07006
(201) 228-9262

May 19, 1988

Ms. Edith Page
Project Director
Office of Technology Assessment
Washington, D.C. 20510

Dear ~~Ms. Page~~ Edith:

I am sorry I did not have an opportunity to thank you for your testimony before the Public Works Surface Transportation Subcommittee hearings on hazardous materials transportation issues.

Your excellent report was very helpful to me in understanding the important issues surrounding the transportation of these dangerous materials and in framing my legislation to require the Department of Transportation to conduct a regional study of the problem.

I also wanted to take this opportunity to ask you several questions for the record. First, can you tell me why the O.T.A. concluded that a regional approach to a hazardous material commodity flow study is the right way to go? Second, could you expand upon and explain your criticism of the Department of Transportation's hazardous material incident statistics? Finally, you stated that only 25% of the nation's emergency response personnel have adequate training. What should be done to improve this situation?

Thank you again for the hard work you and your staff put forth to complete the O.T.A. report. Your contribution is greatly appreciated by those of us in Congress who are trying to ensure the safe transportation of hazardous materials.

Sincerely,

Dean

DEAN A. GALLO
Member of Congress

DAG:sja
cc: Congressman Glenn Anderson
Congressman Bud Shuster

TECHNOLOGY ASSESSMENT BOARD
MORRIS K. UDALL, ARIZONA, CHAIRMAN
TED STEVENS, ALASKA, VICE CHAIRMAN
ORRIN G. HATCH, UTAH
CHARLES E. GRASSLEY, IOWA
EDWARD M. KENNEDY, MASSACHUSETTS
ERNEST F. HOLLINGS, SOUTH CAROLINA
CLAIBORNE PELL, RHODE ISLAND
GEORGE E. BROWN, JR., CALIFORNIA
JOHN D. DINGELL, MICHIGAN
CLARENCE E. MILLER, OHIO
DON SUNDQUIST, TENNESSEE
AMO HOUGHTON, NEW YORK
JOHN H. GIBBONS

JOHN H. GIBBONS
DIRECTOR

Congress of the United States
OFFICE OF TECHNOLOGY ASSESSMENT
WASHINGTON, DC 20510-8025

June 6, 1988

The Honorable Dean A. Gallo
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Gallo:

Thank you for your kind words about OTA's study, Transportation of Hazardous Materials. A great deal of work did go into preparing the report, but it is thanks to the dedication of legislators such as yourself, assisted by your capable staff, that progress will be made in addressing unresolved issues. It is a pleasure to follow up my testimony by responding to your questions for the record.

First, you asked why a regional approach to a commodity flow study is appropriate. OTA learned through data analysis and studying the shipment patterns for several major petrochemical companies that the average gasoline shipment by truck travels 28 miles and the average chemical trip by truck is 253 miles. The average rail trip for chemicals is 728 miles, although major companies told OTA that most of their rail shipments did not exceed 400 miles. These numbers are less important in themselves than the fact that all of these hazardous materials are being transported to or from a facility within a given region. Thus, the essential information need for each jurisdiction is an understanding of the goods most likely to be transported to or from the facilities that lie within its geographic area of responsibility, and through the transportation corridors that traverse it. They also need a generic understanding of emergency response issues and procedures to enable personnel to respond appropriately to any other substances. Shipments change so frequently for so many reasons that detailed attention to shipments at any given time may not provide information applicable to shipments at a later date. Under these circumstances, a regional approach to information on commodity flow is both sensible and cost-effective.

OTA found that DOT's hazardous materials incident statistics were incomplete for several reasons. First and perhaps most important, only incidents that occur during interstate travel must be reported. In other databases we found examples of numerous major spills that occurred during intrastate transport, and consequently did not appear at all in DOT's database. Second, no enforcement mechanism is in place to encourage reporting. Third, spills that fall below a certain cost threshold need not be reported. Estimates of costs are left to the party responsible for the spill, and must be made within two weeks of the spill, often before costs are fully known. OTA examined databases from States, industry groups such as the Association of American Railroads, and the Environmental Protection Agency to develop our own estimates of the magnitude of the incident reporting problems. Since OTA's report was released, DOT has taken a number of steps to address the issues related to incident data, and is on its way to developing a more accurate and complete system. The agency has also proposed requiring reports of spills that occur during intrastate commerce, although a final decision has not yet been made, to my knowledge.

As I said in my prepared testimony, the major remaining unmet need in the area of emergency response training is that of funding for local training programs. The other key elements identified by OTA — training standards and guidelines and adequate information — are already under development. The mechanism for funding is approached in a variety of ways in proposed legislation. Evaluating and addressing the funding issue may be the greatest challenge Congress faces as it considers the Hazardous Materials Transportation Act.

I appreciate the thoughtful approach you and your staff have taken to the transportation of hazardous materials, and your understanding of issues and interest in finding feasible solutions. If I can be of further assistance, please do not hesitate to call.

Sincerely,

Edith B. Page

Edith B. Page
Project Director

cc: The Honorable Glenn Anderson
The Honorable Bud Shuster

Mr. **ANDERSON**. We will have to recess to vote on the OTA appropriations as part of the Legislative Branch.

We'll come back at 12:45 for the next panel.

That excuses you except for answering the questions.

We stand in recess.

[Recess.]

AFTERNOON SESSION—12:45 P.M.

Mr. **ANDERSON**. I apologize for what's happening today, but we're right in the middle of a series of votes.

This time we have a panel consisting of the Hon. James Perron, Mayor of Elkhart, Indiana.

Vernon Conrad, County Supervisor of Fresno, California.

John Mulholland, President, Source Data Network, Bethesda, Maryland.

And John Gargett, Vice President, Research Alternatives, Rockville, Maryland.

We have the statements of each of the participants here, so they will be made a matter of record in their entirety. You may read or extemporize any way you wish.

First, Mayor Perron, then Supervisor Conrad, then President Mulholland, and finally Vice President Gargett.

Okay, Mr. Mayor.

TESTIMONY OF HON. JAMES PERRON, MAYOR, ELKHART, IN; VERNON CONRAD, VICE CHAIRMAN, COUNTY BOARD OF SUPERVISORS, FRESNO, CA; JOHN MULHOLLAND, PRESIDENT, SOURCE DATA NETWORK, BETHESDA, MD; AND JOHN B. GARGETT, VICE PRESIDENT, RESEARCH ALTERNATIVES, ROCKVILLE, MD

Mr. **PERRON**. Thank you very much, Mr. Chairman.

My name is Jim Perron. I'm the mayor of Elkhart, Indiana.

I am grateful to you for the opportunity to be here today to testify on behalf of the United States Conference of Mayors.

The Conference of Mayors is the National organization of chief elected officials in America's cities. While my testimony will focus specifically on hazardous materials transport issues and responses in Elkhart, I can assure you that each of my fellow mayors face the same challenges and would welcome the relief provided in H.R. 3334.

Much has happened in the years since the Hazardous Materials Transportation Act was enacted in 1974. The general state of community awareness of hazardous materials in transport, as well as that at fixed industrial sites, has greatly increased through media coverage on leaking barges, derailed tank cars, jackknifed hazardous materials trucks, and air traffic accidents.

The Bhopal, India incident left an indelible impression on the world regarding the community's right to know about hazardous materials in close proximity to population centers or communities.

As mayor of Elkhart, I'm happy to share some testimony on the experience of the city of Elkhart with hazardous materials release incidents in recent years.

Elkhart is a community of some 45,000 people with daytime employment in the Elkhart urbanized area of approximately 70,000 to 80,000 people.

On February 4, 1985, a leaking railroad tank car containing hydrochloric acid entered the Conrail classification yard on the west side of the city of Elkhart. A plume of toxic vapors drifted towards some of the densely populated areas of our city, requiring evacuation of approximately 1,500 people, as well as potential threats to nursing homes, schools, and our hospital facility.

The response to this release of hazardous materials in transportation by the various law enforcement agencies, fire service, civil defense, and Government officials was adequate to prevent any loss of life or serious injuries and extensive property damage. The National Transportation Safety Board conducted a hearing on the incident in Elkhart, and concluded that although our response was effective, we were also very lucky, as the potential is there for great community vulnerability.

The NTSC recommended that the City of Elkhart consider establishing a Hazardous Materials Response Team. We have in fact done this.

The more training and analysis and planning that we do to assess community vulnerability, the more concerned we become about the magnitude of a potential hazardous materials threat facing the community. We have come to the realization that we can't talk in terms of if another hazardous materials release occurs, but rather when, since it's only a matter of time, given the volume and frequency of hazardous materials in our highly industrialized area.

In addition to developing the hazmat team, an advisory committee from a cross section of our community, we have participated in a county-wide local emergency response committee, established under the Community Right to Know act legislation.

Much planning and training, and mock exercises, need to be performed in order to increase the community level of comfort that they are adequately prepared to address hazardous materials emergencies that are statistically certain to happen in the future.

Specifically, with regard to Congressman Applegate's recommended H.R. 3334 to amend the 1974 HMTA, which is due for reauthorization this year, I would like to offer support.

I have reviewed the bill itself, as well as related memoranda and bulletins, and have discussed this with the technical resource people in the Elkhart area. I think the Chemical Manufacturers' Association is to be commended for having established Chemtrek. They were of great assistance to us in the leaking rail cart incident, as well as other hazardous release incidents in the Elkhart area.

However, I believe that Chemtrek falls short of providing the information that was envisioned by Congress when they enacted the 1974 HMTA. It would be most beneficial to have an instantaneous electronic database of the hazardous materials in transport, as well as some analysis of this data for hotspots of vulnerability. It would facilitate prioritized planning and training for the types of chemicals that are present in greatest volume or frequency of load.

The current manifest tracking system, to my knowledge, is generating mountains of paper that are being stored somewhere by State and Federal agencies, but which are not being entered into any form of database that can be collated and statistically analyzed to attempt a mass balance.

A mass balance on hazardous materials in transport would assure us that what goes into our transportation network also comes out without losses to the environment.

The establishment of a fee for manifest is a good policy approach to paying for this computerized database, as are statistical data analysis, as well as on-line information for our enforcement agencies—our first responders—and local government officials.

The $12.00 fee, in my judgment, represents a minor cost to add to the chemical manufacturer's burden in relation to the benefit provided to the general population.

I believe this cost is rightfully placed as the cost of the product to the manufacturer, rather than a general tax supported function.

I would like to see the language in the bill, on the costs associated with each electronic manifest entry, be based on a documented cost of service, and any annual adjustments in the manifest fee should also be based on documented cost of service, not to exceed the consumer price index.

We've all seen that in this electronic age, it is possible for prices to come down as new technological developments come on the marketplace. I also believe that there is opportunity to have this nationwide electronic data system become more refined as years pass, to the point where cost might be reduced rather than automatically increased according to the Consumer Price Index.

The citizens of the City of Elkhart are currently sharing the cost with local industry when it comes to equipping and training our hazardous materials response team. We have received many generous donations from local chemical manufacturers, but we also have to augment this money with local taxes.

Much training is required for a hazmat team. In Elkhart's case, the hazmat team members are also firefighters, first. So the coverage of their normal firefighting duties while they are involved in training exercises or actual hazmat incidents can result in an overtime liability for the taxpayers of Elkhart.

I believe that the proposed draft program to assist in the equipping and training of the hazmat team would be of particular assistance to Elkhart in meeting the needs of not only our community but the surrounding population centers that would require our assistance through mutual aid on a hazmat incident, since not every locality can afford to have a hazmat team.

For your information, in Indiana, there are only 16 hazmat teams for 88 counties. Elkhart is one of four hazmat teams in the northern part of Indiana. They include Hammond, South Bend, Elkhart, and Fort Wayne.

In considering the distribution of the grant money, Congress and the Secretary of Transportation should keep in mind that not only communities with hazmat teams should be eligible for training and assistance on equipment purchases, but also all first responders. They are all at great risk on hazardous materials incidents and need to be trained to react to hazardous materials incidents in a much different way than they are used to in firefighting or addressing more traditional fire service responsibilities.

In summary, I support H.R. 3334, and urge its passage.

I also, however, want to recommend to your committee that they give serious consideration to the continued role of Chemtrek, and the technical experts on hazardous materials release incidents. I don't believe that the centralized database, collection, and disbursement services, and the continued services of the CME's have to be necessarily mutually exclusive.

I believe there are great benefits to both, and I'm hopeful that a beneficial public-private partnership can be forged by Congress.

Thank you very much.

Mr. **Anderson**. Thank you very much, Mayor Perron.

We'll hold all questions until all witnesses have testified.

Our next witness is Supervisor Vernon Conrad.

Mr. **Conrad**. Thank you, Mr. Chairman.

Mr. **Anderson**. I might as well let you make your statement, and then we'll have to recess for a vote.

Mr. **Conrad**. I'll do this as quickly as possible.

My name is Vernon Conrad, and I'm vice-chairman of the Fresno County Board of Supervisors.

I'm here this afternoon representing central California interests who urge the timely passage of the provisions of H.R. 3334.

This bill would provide a desperately needed mechanism for our local emergency response personnel to quickly identify hazardous materials transported through our cities and rural areas.

As required by the 1974 Hazardous Materials Transportation Act, H.R. 3334 will establish a comprehensive, computerized monitoring system on all shipments of hazardous materials travelling through our communities. All this is at no cost to the county.

At present, the Department of Transportation uses Chemtrek service, which can provide assistance to local emergency response personnel only if the cargo is known. In many cases, hazardous materials cannot be identified quickly due to the destruction or loss of shipping manifests.

Let me relate a specific example of a recent incident in Fresno County. On April 17, 1988, a semi truck rolled over on a county road near Interstate 99, a heavily traveled central California highway.

Due to fire, the tractor and the shipping manifest were destroyed. The driver was not knowledgeable about his load. In this incident, Mid-Valley Fire Department, the Fresno County Sheriff, the Fresno County Environmental Health, and Agricultural commissioners emergency response staff responded to an unknown liquid leaking from the trailer.

In addition, our contract hazardous spill cleanup service was placed on standby for four and a half hours. The roads were blocked off and traffic was re-routed until our people could trace, using the license plate of the trailer, the origin of the load, and obtain definite identification of the substance.

Because this incident occurred on a Sunday, the reconstruction of manifest documents was even more difficult. In this case, the substance turned out to be harmless. But nevertheless, a minimum of $3,200 in local resources were expended in the process of identifying this substance.

This is a dangerous and expensive and irresponsible way to deal with a problem which would have been quickly and easily resolved with the availability of a comprehensive computerized monitoring system, as is required under H.R. 3334.

Truck transport is only one of the problems that we face. Fresno County has within its boundaries two main railroad switching centers, and the two railroad lines cutting directly through the Fresno metropolitan area, the most heavily populated area in the county.

As a result, we have had numerous situations arise in conjunction with the short term storage of concentrated hazardous materials in tank cars and railroad cars awaiting transfer or transportation.

All communities are impacted by transportation of hazardous waste. It is a reality we must deal with. However, Fresno County is this Nation's largest agricultural producing county. We feed millions of people as a result of this industry. A major spill of hazardous materials with clean-up delayed as a result of faulty or nonexistent emergency response systems would have a devastating impact.

I thank you for this opportunity to speak to you today, and urge your support of this bill and its provisions.

Mr. **ANDERSON**. Well, thank you very much, Mr. Conrad.

We will recess for about 15 minutes.

[Recess.]

Mr. **ANDERSON**. The meeting will come to order.

We got in two votes that time, so I think that we have a little bit more time.

Before I recognize the next witness—Supervisor Conrad, Congressman Tony Coelho was involved in these votes, and we were voting back and forth. But he sends you his very best.

Mr. **CONRAD**. Thank you.

Mr. **ANDERSON**. Our next witness is President John Mulholland of Source Data Network.

Mr. **MULHOLLAND**. Thank you, Mr. Chairman.

In the interest of time, I would like to just submit some additional data to the record.

One is a response to a critique of H.R. 334 that had been distributed among Members of Congress by the chemical manufacturers. The responses to this critique is by our technical guru, Dr. Paul Fingeman, in the management and special design team of Boeing Computer Services.

I'd like Dr. Fingeman's comments to go in the record as a response to that particular critique.

Mr. **ANDERSON**. Your original statement is a matter of record, and the additional data will also be a part of the record.

Mr. **MULHOLLAND**. Thank you, sir.

The other thing is that a lot of people have already carried the brunt of what I had to say, so I'll digress quickly.

Obviously I'm here in support of H.R. 3334. This particular bill brings three of the most necessary ingredients to a successful program. That is controls, instant information, and funding.

Based on some of the questions that have been asked earlier, particularly of Mr. Applegate, I'd just like to give a quick synopsis of how the system works.

In essence, what we're requiring or asking to be done is that the generators or shipper—whichever term you like to use—manifest on mainframe computers, either telephonically or electronically, prior to shipment the hazardous waste or hazardous materials.

The cost of that communication is zero. Once that particular material is manifested on the Universal Manifest Form, it goes onto redundant mainframe computers. Currently we're using 3092's, the latest of IBM's. That information, once it's on the manifest or the data system, is immediately available to those who need to know—firefighters, police, emergency response, Federal and City officials.

All the material is encoded and secured. There is no chance of competition raiding another's account.

The system in itself is designed to provide in the neighborhood of $110 million to $150 million annually to equip and train and give communications systems to communities across the Country.

The criteria for the trust fund that exist in that particular bill is specific. The specificity of that program is that those communities must use the flow data chart that we will supply 39,000 communities on a 30-day basis, on a continuing basis. So that every community would know what hazardous materials were going in and out of it on that 30-day time frame.

Obviously, the intent is to spend the dollars correctly in the proper training and equipping for whatever is the predominant hazardous material or waste in that vicinity.

In addition to that, we would expect through this particular system to establish a nationwide communication network. Through this particular funding mechanism and the systems that are currently available, we would accomplish that feat.

The telecommunications systems that we would use would be based on micro, cellular, and satellite communications.

Currently, we're working on a tracking device with the help of God and a little bit of luck in the passage of this particular bill. We'd be able to have a tracking device for secured materials—nuclear, nerve gases, munitions, and what have you—that basically could pinpoint most materials into a 25-foot radius. We currently have up and down links on satellites, we have technology being advanced with the latest from various spook communities, and we would anticipate this particular program going into effect at the same time that our system would be nationwide as relates to the telecommunications system.

In my presentation I've supplied a form that gives you the breakdown of what dollars are to be expended and what we anticipate. In the cost that is mentioned here, people think that for some reason or another, if it's a $2.1 billion gross, that obviously that's your net. Nothing could be farther from the truth.

The truth is that there are no figures to develop any given program. If anyone goes right now to the National Response Center administered by the Coast Guard, he would get a series of numbers but no verification of data.

If you go to the Department of Transportation, you have zero data as to even who the carriers are, much less if they're certified or properly equipped.

On November 18 of 1987, I and a few of my colleagues sat down with the Chemtrek people with the intent of seeing what may be merged into our electronic telecommunications system that would be beneficial to the whole. There are some things that the mayor had mentioned before that are good and certainly should be continued in force.

But we met with seven people, and the first thing out of their mouths on that particular day was, are you a public company. Are you going public? What's your association with your host computer corporation? And how much money are you going to make?

I told him that with luck, we would hope to make four percent return. The thing is that we've got to compute that because we've put up—we and our host computers—in the neighborhood of $1 billion at this time to make the system work. We've put our money up front.

I said, now let's equate that to what AT&T long lines does, which is anywhere between 12.2 and 12.8 percent return, and utilities across the country, which could be in the neighborhood of 18 percent.

But I said, we're going to be very lucky if we recover four percent, because we don't have numbers. And you, Chemtrek, being the keeper of the keys and transportation for eight years, may be able to help us. I said, now, I would like to have some of that data, if it's available.

Namely, how many loads of hazardous material waste are carried every year? No answer.

Where are the accidents, and where did they occur? North, south, east, west of the Mississippi? In the swamps? Near telecommunication lines? Where?

No answer.

I said, how many interrogations can we expect on our mainframe computers over the course of a year for the incidents reported.

No answer.

I said, my God, I'm sitting here talking to seven people. Somebody has got to know the answer. You people have been in charge of this facility now since 1980.

Finally—I said, give me a percentage. That's not too hard. So finally somebody came back and said, well, we think it may be in the area of 10 percent.

Well, 10 percent happened to hit me right in the numbers, because I'd looked at that. And I said, 10 percent interrogation of our system would cost us $4.7 billion a year, and we're looking at a gross of $2.1 billion? Beautiful.

I said, the figures that you people will see on the pie chart—which is a part of the record—is predicated on one-half of one percent. Because we do not know how many interrogations we're going to have by police. We have no idea how long a person is going to maintain a satellite communication.

But we do know that we've got the latest state-of-the-art telecommunications available for those emergency response people, regardless of location.

And it behooves us, as an entity, to maintain the state of the art so that people can get on the satellite and get off the satellite to the scene of the particular incident. That we've accomplished.

But there's one thing that came up, that I would like to read from part of my testimony. I think this is rather unique and rather interesting, and it pertains to cost, and cost comes in many, many forms.

It is time for those in the bureaucratic community to assess the position of government and come to the realization that they work for all of the people, not for any special interest group.

They are not an entity under themselves, and their actions should reflect their interest in the well-being of all those whom they serve.

To ensure the integrity of the office, the office holder should be held culpable for their actions. With this thought in mind, the question is, who shall accept responsibility for lives lost, businesses destroyed, false evacuations that jeopardize the elderly and schoolchildren, or worse? Failure to evacuate in a timely fashion, causing an unnecessary loss of life for lack of authoritative, timely definitive information.

Society will demand an answer as they demanded an answer following the *Challenger* disaster.

To inhibit the implementation of the latest of technologies in the field of computerized telecommunications as required under H.R. 3334, rapid deployment of systems that relate to SARA Title Three could be impeded. Serious repercussions might be felt from those adversely affected for a lack of a program and proper funding.

Extremely serious repercussions are currently being felt, and are reflected in December 17, 1987 report to the Hon. Thomas A. Luken, chairman of the subcommittee on Transportation, Tourism and Hazardous Materials committee on Energy and Commerce.

On November 23, 1983, a letter was directed to a former ranking member of the Public Works Committee by the then-assistant administrator of the United States Environmental Protection Agency. That letter was in response to my proposal to implement an earlier version of H.R. 3334 to bring the transportation of hazardous waste under control.

We were told to contact Mr. Allen I. Robert, the United States Department of Transportation. The writer went on to state that a computerized information system for manifesting, tracking and reporting of hazardous waste materials was of limited value to EPA, as they did not require that manifests be sent to State or Federal agencies.

On July 31, 1984, Section 21 of S. 2892, the 98th Congress—a centralized computerized system became a requirement of the bill, but was dropped from the bill in conference. The results of decisions of both Mr. Lee M. Thomas and Mr. Allen I. Robert, and the failure to keep Section 21 in the law as a control mechanism, have led to the staggering reality that we now have, according to the GAO report just released, over 425,000 hazardous waste sites and a clean-up bill of over $100 billion is reportedly needed, according to the Washington Times and the Wall Street Journal.

With the costs and proliferation of illegal waste sites continuing, all for lack of controls and proper decisions—and this occurred just four years ago—where does this proliferation stop?

This is why we have got to bring controls, we have got to bring these controls under a program that can be properly funded. Most of all, we've got to protect the lives of those people.

Our theme is one lost life is one too many.

I encourage members of the committee to look at that 14 minute tape that was distributed by the firefighters. It shows a working model of actual life production of how the interfacing of our definitive information interrogates and becomes a part of serving Title Three in the community.

I think that when you see it, you'll be totally amazed at what technology can do—right now.

So, I ask that we expedite passage of H.R. 3334.

Thank you.

Mr. ANDERSON. Well, thank you very much, Mr. Mulholland. Our next witness is John B. Gargett, the Vice President of Research Alternatives of Rockville, Maryland.

Mr. GARGETT. Thank you, Mr. Chairman.

Since this bill H.R. 3334 focuses on the use of computers and technology, I think that it's important to reflect on what role the computer currently plays in emergency response.

In 1981 during hearings on emergency management sponsored by then-Congressman Albert Gore, Jr., James Morentz, president of Research Alternatives, concluded his testimony with the following:

> Unless a consistent policy and program for using information technology in emergency management is developed, three years from now, emergency programs in the localities in this country will not be as well managed as the local barbershop or the local butcher shop.
>
> Inexpensive computers will have made such an impact on small business that even the smallest will have more knowledge and more analytical power at their fingertips than the office that is charged with protecting the entire jurisdiction from catastrophe and leading the community survival from a nuclear attack.

His warning was half right. Barbershops and butcher shops may have advanced computations and analytical tools.

However, even without any form of consistent program to promote computer use in emergency management, and in spite of considerable foot dragging among policy organizations, emergency management agencies all across the country have turned to automated tools.

As the purpose of this testimony is to offer stimulus for reflection and further discussion, let me highlight several innovative applications that have been put in place in the Commonwealth of Pennsylvania. These applications bear witness to the creative present and unlimited future of information technology applications in emergency management.

The Pennsylvania Emergency Management Agency, PEMA, began its automation efforts with a single, portable computer and a text version of the Emergency Information System—EIS.

When devastating tornadoes struck the State, the need for further automation was evident. Within days of the disaster, using emergency authorities, the Agency had purchased and installed IBM computers and the mapping version of EIS.

In the following months, a six-computer network was installed in the PEMA emergency operations center, and a statewide mapping project was begun.

In the nearly four years since those tornadoes, the State EOC has developed to more than 30 computers on its network, and a map inventory of thousands, extending from county road maps to floor plans of high-risk buildings.

In addition, three PEMA area offices have networks, and more than 30 of the Pennsylvania counties have computers and software.

In the process, Pennsylvania has led the way for emergency agencies in its support of technological applications. Among these are chemical manufacturing site planning, with detailed maps of vulnerable zones and chemical locations.

Radiological emergency response planning around nuclear power plants, with evacuation routes, traffic control points, risk populations, and even team psychosomatics to explain what is happening inside the plant.

Special emergency needs—schools, hospitals, jails, and nursing homes, and general population census that allows demographic information to be retrieved for any emergency scene.

Rainfall and river gauges linked to a proactive flood monitoring program to display inundation area projections based on river gauge forecasts.

Evacuation requirements modeling to identify transportation and resource needs for evacuation of special care facilities, using block by block maps in heavily populated areas.

River corridor mapping of water use facilities, and requirements for both contamination prevention and capacity replacement.

Inventory and map display of cattle herds and milk processing plants within the 50 mile ingestion pathways of five nuclear power plants.

Satellite communication systems for complete electronic data and map transfer, and early warning system.

Plume dispersion models and emergency response procedures for the accidental release of more than 2,500 toxic chemicals.

Emergency plans from State management plans, fire department standard operating procedures, integrated into a single, automated format for the retrieval of exactly the right operational guidance at the right place and time.

Counterterrorism plans and detailed mapping of airports and historic areas and Government facilities.

All of these decision support tools are available on computers today through the PEMA-EIS network, and are displayed on large, six by eight foot projection screens in the command center, as well as viewed from a quiet, glass-enclosed Governor's briefing room for Executive deliberation.

Again, these tools are in use every day, in real emergencies and exercises. The system has aided in the evacuation of more than 20,000 people on successive weekends because of hazardous material spills in the Commonwealth.

It was used for 12 days nonstop during 24-hour operations in the massive oil spill in the Ohio River, and has weathered tornadoes, floods, and hurricanes.

While these technological advancements are impressive, full utilization of the computer in emergency response is dependent upon accurate, factual and timely information. No single hazard more clearly points this out than the transportation of hazardous materials.

At present, there exists little or no effective legislation at the Federal level for the regulation of hazardous chemical shipments. Title Three of the 1986 Superfund amendments and Reauthorization Act—the most sweeping piece of emergency planning legislation ever passed—specifically exempted transportation and temporary storage of hazardous materials.

Technically, the emergency which arose after the Ashland oil spill in Pennsylvania was a situation where emergency planning was not required under Title Three.

Fortunately, the officials of Ashland Oil were a model of cooperation. They provided accurate, factual and timely information. This may not be the case when a tanker truck or rail car are involved in an accident.

Pennsylvania, while the leader, has been joined by several other States, most notably Washington and New Jersey State Police. All three have formally adopted this system as the State standard for emergency planning. In addition, there are over 250 county and local government emergency agencies across the Nation using this type of software.

This is a long way from just a few years ago, when an electric typewriter was a rarely found technology among emergency managers.

The emergency management profession clearly is one where the application of computing and communications technologies is bearing fruit now, while holding promise for even more exciting gains in the future.

A couple of comments from this morning's presentations, which I heard.

One was an issue regarding transportation of materials down corridors, or hazardous materials corridors. I think that I heard the phrase 295 miles as the longest run.

I'll submit to you that any run of 295 miles down an interstate will pass through tens or hundreds of small communities which have no means of protection for themselves.

Secondly, without definitive data available, if an accident does occur, that community doesn't know what is on board. In the case we heard earlier, when it was a harmless substance, evacuation procedures may begin, and people may be moved unnecessarily.

The other statement that I heard this morning was that Pennsylvania had more accidents than anywhere else. I would submit to this committee that the reason for that is that Pennsylvania has led the way in the use of computers and technology in handling the response to hazardous materials and other disasters, and perhaps they have the most because of their reporting procedures.

Finally, a comment was made on training dollars. I don't know that from the local emergency managers responsibilities, and what they have to deal with day to day in hazardous materials, that any amount of money is too much money to spend.

They need money in order to prepare for these types of disasters.

Thank you for your time.

Mr. ANDERSON. Thank you, Mr. Gargett.

Any further questions? We'll lead right to left.

Mr. Conrad, in your statement, you say that the driver involved in an accident was not knowledgeable about what he was transporting.

Should not he have known if he was transporting a hazardous material?

Mr. CONRAD. He certainly should have, but that doesn't necessarily mean that he did.

Mr. ANDERSON. Now, you also indicate that the Mid-Valley Fire Department, the Fresno County Sheriff, and an emergency response staff responded to the accident.

Who trains these emergency responders, and who pays for it?

Mr. CONRAD. The primary responsibility rests with the Fresno County Environmental Health department, and their training is dual responsibility with the county and the State, and, I believe, they receive some Federal funds.

Mr. ANDERSON. Can you estimate the cost of training these personnel?

Mr. CONRAD. No, sir. I can't.

Mr. ANDERSON. Mayor Perron, you mentioned that you were testifying on behalf of the Conference of Mayors. I note that in your prepared statement—is the Conference supporting the enactment of H.R. 3334?

Mr. PERRON. My understanding is that they are in support of H.R. 3334, yes.

Mr. ANDERSON. Also, Mayor Perron, when you commenced the training of the emergency response team in Elkhart, did the City request help from any Government agencies at the Federal or State level, and if so, what help did the City receive?

Mr. PERRON. We felt that it was important enough to establish this on our own, which is what in fact we did.

The only Federal monies utilized were some of the dwindling, last appropriations the Federal Government had given in order to purchase some of the equipment.

This was strictly other local tax revenues plus monies that we were able to raise from the private sector.

Mr. ANDERSON. Approximately how much does it cost the City to train and retrain its response teams?

Mr. PERRON. I don't have those figures with me.

Mr. ANDERSON. My problem is that nobody seems to have them.

Mr. PERRON. But in answer to that, for the record, I'd be happy to get that for you, and send it.

Mr. ANDERSON. If you could.

Mr. PERRON. I will.

Mr. ANDERSON. We do need an idea about what these costs are.

Mr. PERRON. I'll submit that to you.

Mr. ANDERSON. And could you tell us, Mayor Perron, what kind of equipment the City needed to purchase for its response team? Could you tell us the cost of that equipment?

Mr. PERRON. The major piece of equipment was an actual hazardous materials transportation unit.

Again, supplied with the various equipment, the clothing and the other equipment that they needed—again, costwise, I'll prepare that for you and have it submitted to this committee.

Mr. **Anderson**. If there's anything they could give us, our record will be open for it, easily for two or three weeks. Anything that you think we ought to have that would help clarify these cost figures, particularly, we would appreciate it.

Mr. **Perron**. Absolutely.

[The following was received from Mr. Perron:]

MAYOR'S OFFICE
(219) 294-5471

CITY OF ELKHART
JAMES P. PERRON, Mayor

MUNICIPAL BUILDING
229 SO. SECOND STREET
ELKHART, INDIANA 46516

June 7, 1988

RECEIVED

JUN 27 1988

947

7-5-88

The Honorable Glenn Anderson, Chairman
The Surface Transportation Sub-Committee
of the Public Works and Transportation Committee
United States House of Representatives
2329 Rayburn House Office Building
Washington, D.C. 20515

RE: HR 3334

Dear Representative Anderson:

As a follow-up to my testimony before the your committee on May 19, 1988 reference the above captioned legislation, you had queried me as to how much does it cost the city to train and retrain our hazardous materials response team. Also, you inquired as to the cost of the equipment for a Haz-mat unit.

In answer, our Haz-mat team is comprised of one team coordinator, two team leaders and twelve team members. All are members of the Elkhart Fire Department. The City of Elkhart spent approximately $37,500.00 for initial training for the team and we budget $15,000.00 each year in our operating budget for on-going education. This all comes from local property tax dollars.

The City's initial costs for the vehicle and equipment, special clothing and chemicals were $80,000.00. A portion of these initial costs were paid for by private donations from local industries in Elkhart involved in the handling and transportation of hazardous materials. A portion of this initial cost also came from our last allotment of federal revenue and the remainder from local property tax dollars.

The City of Elkhart budgeted $20,000 for fiscal year 1988 for operation cost of the team excluding training. Again, these are budgeted out of local property tax dollars.

Please consider this an addendum to my May 19th testimony to be incorporated into the record of hearings on HR 3334.

Again, your support for this legislation is appreciated. Should you have any further inquiries regarding our hazardous materials unit, please do not hesitate to contact me.

Sincerely,

CITY OF ELKHART

James P. Perron, Mayor

cc: Representative Douglas Applegate
Senator Richard Lugar
Senator Dan Quayle
Representative John Hiler

Mr. **Anderson**. And, Mr. Mulholland, again somewhat the same way.

Can you tell us the approximate cost, if any, to localities to install the necessary equipment that would be needed to access information in case of an accident?

Mr. **Mulholland**. Yes, sir.

The latest state-of-the-art equipment which would include interface with satellite cellular, a computer system capable of handling 20 megabytes operating off a 12 volt system—we're talking in the neighborhood of $4,500 per unit.

The beauty of the unit is that it's portable to other units, so that if the system is down, it can be transported. We expect that type of communications to exist within a city, and certainly within the Mayor's office, or whomever he decrees as an additional backup.

Mr. **Anderson**. Now, Mr. Gargett, how would your system, which you referred to, be used to track the flow of hazardous materials, and how would it help emergency responders to respond to an accident involving a truck or a train?

Mr. **Gargett**. With definitive data, the response to a train or truck accident is very easy. How it is used—once the data is available, you can create a plume model, or create what the potential effect is. How much area could potentially be involved as a result of that accident. Then you could do evacuation planning, call and retrieve your special needs—your jails, nursing homes and hospitals, which are required now by those emergency responders to be planned for under SARA.

The use of the system on the broad scope for any emergency is not any different for a tornado than it is for a hazardous materials event. So from that viewpoint, what already currently exists across the country would be used in much the same way.

Mr. **Anderson**. Mr. Hastert?

Mr. **Hastert**. Thank you, Mr. Chairman.

In your envisionment of this bill being enacted, where do you draw the line? How much, or who are the carriers of hazardous waste?

Let's say that a janitorial supply company carries Chlorox and cleaning compounds and things, that could be hazardous. Are they covered under this law?

Mr. **Mulholland**. Are you addressing that to me?

Mr. **Hastert**. Yes.

Mr. **Mulholland**. I'm not going to procrastinate, but I'll tell you this. We're dealing primarily with telecommunications. It does involve intra and interstate. The hazard is there, regardless.

We have the perfect example of this on I-495 last month.

Mr. **Hastert**. I understand that.

Mr. **Mulholland**. We had over 100,000 people affected, and the combination of our definitive information service and the SARA Title Three program that Mr. Gargett mentioned—people would have known in two minutes and had communications to break up that into whatever happened.

Mr. **Hastert**. Would every pickup truck and panel truck and van carrying hazardous waste—or, not hazardous waste, but potentially hazardous materials—be covered under this? Is that correct?

Mr. **Mulholland**. That is not defined in the bill. As a matter of fact, I appeared before the Business Roundtable on this very issue.

What is carried? I said that I don't think that's the parameters of our bill. But we based it on what the Federal codes are.

Mr. **Hastert**. Well, there's a point to my question.

Mr. **Mulholland**. I personally would advocate it.

There is a huge—there are other things, for example, that get very involved. When you're talking about microisotopes—all kinds of things that are just as hazardous as what you see on the road.

Minute quantities—people don't know they're there. But they are there.

Mr. **Hastert**. So what you're saying is that things that don't have to necessarily travel in big trucks to be hazardous and actually included in the scope of this bill.

How many transactions a day—how many shipments of all-encompassing goods would there be?

Mr. **Mulholland**. That number—on major transport, we're talking in excess of 500,000.

Mr. **Hastert**. Half a million?

And if you started to tie in all these other hazardous materials, it would be significantly more, too. Right?

Mr. **Mulholland**. Yes.

But, I'll add to this. I know it can be a burden to some degree. But when you start thinking of modern technology and modern computers, they can handle 10 million transactions per second. You're talking about real state-of-the-art and what can be done.

Mr. **Hastert**. Well, that's just my question.

How far do we go before we get bogged down in the data?

Mr. **Mulholland**. Well, it's just amazing how far technology has come. Telecommunications, of course, is the key.

Mr. **Hastert**. Thank you.

Mr. Chairman, in the interest of time, I relinquish the rest of my time.

Mr. **Anderson**. Thank you.

We are ready for the second bell on our vote, so we do have to vote.

I think that will complete this panel.

Thank you very, very much.

We will stand in recess, and we'll excuse this panel. When we come back in about 15 minutes after this vote, we'll then call the next panel—Mr. Donovan and Mr. Sweeney.

[The prepared statements of Mr. Perron, Mr. Conrad, Mr. Mulholland, and Mr. Gargett follow:]

TESTIMONY OF HON. JAMES P. PERRON, MAYOR OF ELKHART, IN

Good morning, Mr. Chairman, I am Jim Perron, the Mayor of Elkhart, Indiana. I am grateful to you for the opportunity to hear today to testify on behalf of the United States Conference of Mayors in support of H.R. 3334. The Conference of Mayors is the national organization of the chief elected officials in America's principal cities. While my testimony will focus specifically on hazardous materials transport issues and responses in Elkhart, I can assure you each of my fellow mayors face the same challenges and would welcome the relief provided in H.R. 3334.

Much has happened in the years since the Hazardous Materials Transportation Act (HMTA) was enacted in 1974. The general state of community awareness of hazardous materials in transport, as well as at fixed industrial sites, had greatly increased through media coverage on leaking barges, derailed tank cars, jack-knifed hazardous material trucks, and air traffic accidents. The Bhopal, India incident left an indelible impression on the world regarding the community's right-to-know about hazardous materials in close proximity with populations centers or communities.

As Mayor of Elkhart, I am happy to share some testimony on the City of Elkhart's experience with hazardous materials release incidents during recent years. Elkhart is a community of some 45,000 people, with daytime employment in the Elkhart urbanized area of approximately 70 to 80 thousand people. On February 4, 1985 a leaking railroad tank car containing Hydroflouric Acid entered the Conrail Classification Yards on the near west side of the City of Elkhart. A plume of toxic vapors drifted towards some of the densely populated areas of our city, requiring evacuation of approximately 1500 people, as well as potential threats to nursing homes, schools and our hospital facility. The response to this release of hazardous materials in transportation by the various law enforcement, fire service, civil defense and government officials was adequate to prevent any loss of life or serious injuries or extensive property damage. The National Transportation Safety Board conducted a hearing on the incident in Elkhart and concluded that although our response was effective, we were also very lucky as the potential is there for great community vulnerability.

The NTSB recommended that the City of Elkhart consider establishing a Hazardous Materials Response Team, which we have in fact done. The more training and analysis and planning that we do to assess community vulnerability, the more concerned we become about the magnitude of the potential hazardous materials threat facing the community. We have come to the realization that we can't talk in terms of "if another hazardous materials release occurs", but rather *when*, since it's only a matter of time given the volume and frequency of hazardous materials in our highly industrialized area. In addition to developing the HAZMAT Team with an Advisory Committee of a cross section of our community, we have participated in the County wide Local Emergency Response Committee established under the Community Right-to-Know SARA Title III legislation. Much planning and training and mock exercises need to be performed in order to increase the community level of comfort that they are adequately prepared to address hazardous materials emergencies that are statistically certain to happen in the future.

Specifically, with regard to Congressman Applegate's recommended HR 3334 to amend the 1974 HMTA, which is due for reauthorization this year, I would like to offer support. I have reviewed the bill itself, as well as related memoranda and bulletins and have discussed this with technical resource people in the Elkhart area. I think the Chemical Manufacturer's Association is to be commended for having established ChemTrec. They were of great assistance to us in the leaking railcar incident as well as other hazardous release incidents in the Elkhart area; however, I believe that ChemTrec falls short of providing the information that was envisioned by Congress when they enacted the 1974 HMTA. It would be most beneficial to have an instantaneous electronic data base of the hazardous materials in transport as well as some analysis of this data for "hot spots" of vulnerability. It would facilitate prioritized planning and training for the types of chemicals that are present in greatest volume of frequency of load. The current manifest tracking system, to my knowledge, is generating mountains of paper that are being stored somewhere by State and Federal agencies, but are not being entered into any form of data base that can be collated and statistically analyzed to attempt a mass balance. A mass balance on hazardous materials in transport would assure us that what goes into our transportation network, also comes out without losses to the environment.

The establishment of a fee per manifest is a good policy approach to paying for this computerized data base and statistical data analysis, as well as on-line information for our enforcement agencies, our first responders and local government officials. The $12.00 fee, in my judgement, represents a minor cost to add to the chemical manufacturers burden in relation to the benefit provided to the general population. I believe this cost is rightfully placed as a cost of the product to the manufacturer, rather than a general tax supported function. I would like to see the language in the bill on the cost associated with each electronic manifest entry be based on a documented cost of service and any annual adjustments in the manifest fee should also be based on documented cost of service, not to exceed, the consumer price index.

We have all seen that in this electronic age it is possible for prices to come down as new technological developments come on the market place, and I also believe there is opportunity to have this nationwide electronic data system become more refined as years pass, to the point where costs might be reduced, rather than automatically incresed according to the consumer price index.

The citizens of the City of Elkhart are currently sharing the cost with local industry when it comes to equipping and training our Hazardous Materials Responses Team. We have received many generous donations from local chemical manufacturers, but we also have to augment this money with local taxes.

Much training is required for a HAZMAT Team. In Elkhart's case the HAZMAT team members are also Firefighters first, and so the coverage of their normal firefighting duties, while they are involved in training exercises or actual HAZMAT incidents, can result in a overtime liability for the taxpayers of Elkhart. I believe that the proposed grant program to assist in the equipping and training of the HAZMAT team would be of particular assistance to Elkhart in meeting the needs of, not only our Community, but the surrounding population centers that would require our assistance through mutual aid on a HAZMAT incident, since not every locality can afford to have a Hazardous Materials Response Team. For your information, in Indiana there are only 16 HAZMAT teams for 88 counties, Elkhart is one of four HAZMAT teams in the northern part of Indiana north of Kokomo (Hammond, South Bend, Elkhart and Fort Wayne).

In considering the distribution of the grant money the Congress and the Secretary of Transportation should keep in mind that not only communities with HAZMAT teams should be eligible for training and assistance on equipment purchase, but all first responders are at great risk on hazardous materials incidents and need to be trained to react to a hazardous materials incident in a much different way than they are used to using for fighting fires or addressing more traditional fire service responsibilities.

In summary, I support HR 3334 and urge its passage. I also however, want to recommend to your committee that they give serious consideration to the continued role of ChemTrec as technical experts on hazardous materials release incidents. I don't believe that the centralized data base collection and disbursement system and the continued service of the CMA's ChemTrec necessarily have to be mutually exclusive. I believe there are great benefits to both and I am hopeful that a beneficial public/private partnership can be forged by the Congress.

STATEMENT OF VERNON CONRAD

Good Morning Ladies and Gentleman: My name is Vernon Conrad and I am the Vice Chairman of the Fresno County Board of Supervisors. I am here this morning representing Central California interests who urge the timely passage of HR 3334. This bill will provide a desperately needed mechanism for our local emergency response personnel to quickly identify hazardous material transported through our cities and rural areas.

As required by the 1974 Hazardous Materials Transportation Act, HR 3334 will establish a comprehensive computerized monitoring system on all shipments of hazardous materials traveling through our communities. All this is at no cost to the County.

At present, the Department of Transportation uses the CHEMTREC Service which can provide assistance to local emergency response personnel *only* if the cargo is known. In many cases, hazardous materials cannot be identified quickly due to the destruction or loss of shipping manifests.

Let me relate a specific example of a recent incident in Fresno County.

On April 17, 1988, a semi-truck rolled over on a County road near Interstate 99 (a heavily traveled Central California highway). Due to fire, the tractor and shipping manifest were destroyed. The driver was not knowledgeable about his load. In this incident, the Mid-Valley Fire Department, Fresno County Sheriff, Fresno County Environmental Health, and Agricultural Commissioner Emergency Response staff responded to an unknown liquid leaking from the trailer. In addition, our contract hazardous spill clean-up service was placed on standby for 4 and ½ hours. The roads were blocked off and traffic rerouted until our people could trace (using the license plate on the trailer) the origin of the load and obtain definite identification of the substance. Because this incident occurred on a Sunday, the reconstruction of manifest documents was even more difficult. In this case, the substance turned out to be harmless, but nevertheless, a minimum of $3,200 in local resources were expended in the process of identifying the substance.

This is a dangerous, expensive and irresponsible way to deal with a problem which would have been quickly and easily resolved with the availability of a comprehensive computerized monitoring system as is required under HR 3334.

Truck transport is only one of the problems we face. Fresno County has within its boundaries two main railroad switching centers, and two railroad lines cutting directly through the Fresno metropolitan area (the most heavily populated area in the County). As a result, we have had numerous situations arise in conjunction with the short-term storage of concentrated hazardous materials in tank cars and railroad cars awaiting transfer or transportation.

All communities are impacted by the transportation of Hazardous waste. It is a reality we all must deal with. However, Fresno County is this Nation's largest agricultural producing County. We feed millions of people as a result of this industry. A major spill of hazardous materials with clean-up delayed as a result of faulty or non-existent emergency response systems would have a devastating impact.

I thank you for this opportunity speak to you today and urge your support for HR 3334.

STATEMENT OF

JOHN F. MULHOLLAND

PRESIDENT
SOURCE DATA NETWORK
12300 TWINBROOK PARKWAY
SUITE #500
ROCKVILLE, MD 20850

ON REAUTHORIZATION OF THE HAZARDOUS MATERIALS TRANSPORTATION ACT

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

COMMITTEE ON PUBLIC WORKS & TRANSPORTATION

UNITED STATES HOUSE OF REPRESENTATIVES

MAY 19, 1988

WASHINGTON, D.C.

Mr. Chairman and Members of the Subcommittee:

I appear before you in support of H.R.3334; a bill that mandates the establishment and maintainance, within 90 days of passage, of a true state-of-the-art computerized telecommunication" central reporting system and data center so as to be able to provide the law enforcement and firefighting personnel of communities, and other interested persons and government officers, with technical and other information and advice for meeting emergencies connected with the transportation of hazardous materials;"as intended in Sec.109.(d)(2) of 49 USC 1808. It had been declared the policy of the Congress (Sec.102 49 USC 1801.) "to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation against the risks to life and property which are inherent in the transportation of hazardous materials in commerce." when it passed the "Transportation Act of 1974". It is now time for the Congress to fulfill its declaration by passing H.R.3334, without further delay, for the current program is in desperate need of improvement as attested too by the volumes of reports performed for many committees and subcommittee of the Congress, as well as for the office of the Secretary of Transportation.

By passing H.R.3334, a multi-million dollar system can be operational within 90 days of formal passage that will not only fulfill the intent of the Congress, but will provide controls for the transportation of both hazardous materials/waste. Implementation and maintenance of this system requires NO TAX DOLLARS.

H.R.3334 requires that the generator (shipper) of hazardous materials/waste access the systems mainframe redundant computers and log the cargo as described on the universal manifest form and the carrier it will be carried on--prior to shipment. The identification of the generator, the carrier and the receiver is cross-checked for validity before being accepted by the system and the tag number of the trailer, barge number, train car number or aircraft number must be correctly entered. Once the manifest is accepted by the system computers, a unique manifest number is generated by the computer for that particular manifest and acts as a verification ID for that shipment until it has been properly received at its destination. Telephonic or electronic access to the mainframe computers is by an 800 telephone # or free dedicated lines.

Once the definitive cargo data is recorded on the system computers, the data will be immediately available to emergency response personel, police and firefighters on a need know basis--within seconds of proper inquiry. Supporting information of all emergency data can be called up on the MultiSpeed laptop computer, instantaneously, by the scene commander as the emergency conditions require. Free REAL TIME access to the system will be given to federal, state and local governments as well as to the emergency responders. Recovered data from the systems computer files will provide accurate information on the transportation of hazardous material/waste in and out of 39,000 communities on a thirty day basis. This information will be supplied, without charge, to these cities so that their emergency response personel will be properly equipped and trained for the more prominent hazards they are most likely to encounter. This free service should aid in resolving the "right to know" issue while building the emergency response capability to maximun potential.

H.R.3334 requires that 5% of the $12 manifest fee be designated to a trust, to be administered by the Secretary of Transportation, explicitly for the training and equipping of fire-fighters, police and the purchase of telecommunication equipment for communities who make use of the hazardous material/waste flow data as supplied by the system. The fund must be drawn down and disbursed on a quarterly schedule. Additional funds can be made available to states and communities to insure more rapid compliance with the provisions of Title III of the Superfund Amendments and Reauthorization Act of 1986 (P.L.99-499). Total revenues to be generated by the system for equipment and training are estimated to be between $110,000,000 and $150,000,000 annually.

INVOLVEMENT

It is reasonable for you, as a subcommittee to ask why more legislation, and why H.R. 3334. My answer must be direct and forthright, for the lives and property of 244,000,000 people are in imminent peril, and you, as their representatives in Congress, are the only ones who can correct the blatent disregard for existing laws by those public officials entrusted to fulfill the will of Congress.

Over 500,000 shipments of hazardous waste and material criss cross our nation on a daily basis-- completely uncontrolled. Will we have a Bhopal, here in the United States, where 2000 people lost their lives, or a mobile Bhopal? Whose community or district will it be in? Will those fire-fighters and emergency response personel be properly equipped and will they have the definitive data so vital in making life saving decisions at a moments notice? The answer is no, for there is no system in place to provide data, there is no system to provide funding for training, there are no telecommunications to transmit data to the accident site and there are no controls to assure proper placarding of vehicles in transit. It ~~is~~ more than disturbing when the International Association of Fire Fighters (IAFF) and their 1.2 million fire-fighters across the nation, who put their lives at risk at a moments notice, had to ban further use of the DOT supported information program known as CHEMTREC.

The Office of Technological Assessment (OTA) report of March 1986; a study conducted on behalf of the Senate Committee on Commerce, Science and Transportation states in its Foreward: "At present, no one knows for certain the total quantities and types of hazardous materials that are transported, confusion exists over how safe the transportation process is or ought to be, the public needs better information, and emergency response personnel need training". The report summarized Federal programs and identified three major areas of state and local concern: 1. presentation and enforcement activities; 2. emergency response, training and planning; 3. data gathering.

On page 6 the OTA report states: "There is no central clearinghouse to collect and analyze hazardous materials transportation information". "State and local enforcement and emergency response personnel are dissatisfied with the information accompanying hazardous material shipments. Placarding requirements should more accurately reflect the degree of hazard of the material, and shipping papers should include more information on the nature of the hazard posed and accident mitigation techniques".

On page 9: "An effective way to deliver hazardous materials training to first responders is the most pressing national need in emergency response".

An 1983 informal survey of states participating in the State Hazardous Material Enforcement Development program (SHMED) identified the following as the most

common violations found during roadside inspections: A. Failure to display the correct placard. B. Failure to brace or block hazardous materials containers. C. Leaking discharge valves on cargo tanks. D. Improperly described hazardous wastes. E. Inaccurate or missing shipping papers. F. Excessive radiation levels in the cab of the truck.
Accurate placards and shipping papers are particularly important for the safety of first responders to hazardous materials emergencies, as they provide esearch essential, basic information on the nature of the problems the responders face. State enforcement officials estimate that one-quarter to one-half of all hazardous materials vehicles have inproper placards.

Who else can those being jeopardized turn to but you their representative? But there is more---

In 1983 The Transportation Research Board of the National Academy of Sciences, National Research Council released a two and a half year study "SPECIAL REPORT 197", in two Volumes in cooperation with the U.S. Department of Transportation, Research and Special Projects Administration (RSPA), Federal Emergency Management Agency (FEMA) and the National Association of Governors Highway Safety Representatives. In Volume 1, page 5 Findings and Recommendations have been ignored particularly #4 referring to emergency response. Volume 2, page 64 suggests the adoption of the type system you are asked to consider in H.R.3334.

These recommendations were made three years after RSPA formally recognized, by Letter of Understanding, CHEMTREC, owned and operated by The Chemical Manufacturers Association (CMA), the very industry the Transportation Act of 1974 was passed to guard the nation against. Besides the total inadequacies of CHEMTREC, the Letter of Understanding is very disturbing as it places no requirements on CHEMTREC as to performance, the requirement to have people on duty--at any time, nor does it constitute a legal reporting facility under the law.

To allow this condition to continue, perpetrates a fraud on the American people by giving false assurances that they are adequately protected against the risks to life and property which are inherent in the transportation of hazardous materials in commerce. To continue---The OTA report on the Transportation of Hazardous Materials states on page 33 of the Summary, "City officials and planning personnel have been the most vocal in expressing to OTA a need for a national commodity flow data resource.---"some requests have been made for a real-time notification system for especially hazardous shipments".---"On the other hand, a few local officials and planners want real-time tracking of hazardous materials shipments and have called for the development by DOT of a publicly accessible database to provide this information". Page 36 of the report states: "OTA finds that RSPA has an incomplete record of accidents and releases and has no documentable idea of how much hazardous material is transported". "The HMIS (Hazardous Material Information System) is currently an inadequate database." "the reporting requirement is not enforced,"

The study reflects a disastrous situation at RSPA! To continue---

The United States Department of Transportation:

SAFETY REVIEW TASK FORCE
REPORT ON THE HAZARDOUS MATERIALS PROGRAM OF THE
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
(RSPA)

February 1986
Six years after the formal recognition of CHEMTREC, the TASK FORCE, on an internal study of RSPA, remember this is the group that formally recognized CHEMTREC IN 1980, states on page 19 of the report,"The working group recommended the establishment of a single data system into which data can be entered by each modal group for retrieval by all at any time. The working group report also indicated that, "the difficulty with this approach centers around identification of records to be entered, the length of time to implement such a system, and the human and financial resources required to establish such a tsystem".

H.R.3334 demands that a nationwide telecommunication system be installed to satisfy the requirements of HMTA, for it fulfills all the requirements as recommended by the National Academy, OTA states on page 34 of the Summary, "A real time data system is probably the only way to keep abreast of shipments", and goes on to refer to the SDN system specifically. OTA does state "Online telephone access to real-time information on all hazardous materials shipments is neither feasible nor cost effective, OTA concludes".

When queried about the OTA conclusion as to what data they had to support their position, Ms. Edith Page admitted they had none and based their comments solely on the vastness of the system. You members of the subcommittee have witnessed a demonstration of that vast system in "A Nation At Risk". The same system that all federal, state and local communities will be given FREE REAL-TIME access too in conjunction with law enforcement, fire-fighters and emergency response personnel across the nation.----MORE

On February 17, 1986 Lt. Gen. Julius Becton (ret.) Director of the Federal Emergency Management Agency stated in The Washington Times, "Think of the Beltway, and how frequently a truck flips over and burns with some gas or toxic agent," How do police or firemen recognize what's on the truck? Should they let it burnout? Should they evacuate people? I'd like to see fire engines equipped with a cheap computer, something you could buy at Radio Shack. They could punch in the appropriate code and get a readout on what the substance is and how it should be handled--easy and inexpensive." NOTE: Gen. Becton has been invited on numerous occasions to review a live demonstration of the system called for in H.R.3334 and in two years and three months (27 months) has yet to accept the offer, and in fact, has failed personally to respond to the letter of a member of the Congress in regards to that offer. The sad portion of this tale, is that FEMA is charged with developing a nationwide telecommunication network, without hardline, to assure instant communication in the event of a national disaster. WITH THE IMPLEMENTATION OF H.R.3334, GEN BECTON, AND FEMA, would have that telecommunication network in place with NO COST TO THE TAXPAYER!

The latest recommendation for a system as depicted in H.R.3334 comes from Dr. Paul F. Rothberg, Science Policy Research Division, Congressional Research Service, Library of Congress in his testimony on LEGISLATIVE OPTIONS INTENDED TO IMPROVE DOT'S HAZARDOUS MATERIALS TRANSPORTATION PROGRAM and to PROMOTE TRANSPORTATION SAFETY before the Subcommittee on Surface Transportation of the Senate Committee on Commerce, Science and Transportation. Option No. 4: "DOT could require: (1) that a shipper of a hazardous material supply emergency response information to a hot-line or communications system that is staffed 24 hours a day" and goes on to say "or establish new systems to meet these requirements".

It is time for those in the bureaucratic community to assess their position in government and come to the realization they work for all the people and not for any special interest group. They are not an entity unto themselves and their actions should reflect their interest in the well being of all those they serve. To insure the integrity of the office, the office holder should be held culpable for their actions. With this thought in mind, the question is who will accept responsibility for lives lost, businesses destroyed, false evacuations that jeopardize the elderly or school children, or worse, failure to evacuate in a timely fashion causing unnecessary loss of live for lack of authoritative, timely, definitive information? Society will demand an answer, as they demanded answers following the Challenger disaster.

To inhibit the implementation of the latest of technologies in the field of computerized telecommunications, as required under H.R.3334, rapid deployment of systems that relate to SARA Title III could be impeded. Serious repercussions might be felt from those adversely affected, for lack of a program and--proper funding.

Extremely serious repercussions are currently being felt and are reflected in the December 17th, 1987 GAO report to the Honorable Thomas A. Luken, Chairman, Subcommittee on Transportation, Tourism and Hazardous Materials, Committee on Energy and Commerce. On November 23, 1983 a letter was directed to a former ranking member of the Public Works Committee by the then Assistant Administrator of the United States Environmental Protection Agency. The letter was in response to my proposal to implememt an earlier version of H.R.3334 to bring the transportation of hazardous wastes under control. We were told to contact Mr. Allen I. Roberts of the U.S. Dept. of Transportation. The writer went on to state that a computerized information system for manifesting, tracking, and reporting of hazardous wastes and materials was of limited value to EPA, as they did not require that manifests be sent to State or Federal agencies.

On July 31, 1984 Sec. 21 of S.2892 (98th Congress 2d Session) our centralized, computerized system became a requirement of the bill, but was dropped from the bill in conference.

The results of the decisions of both Mr. Lee M. Thomas and Mr.Allen I. Roberts, and the failure to keep Sec.21 in the law as a control mechanism, have led to the staggering reality that we now have over 425,000 hazardous waste sites and a cleanup bill of over $100,000,000,000---with the costs and proliferation of illegal waste sites continuing. All for lack of controls and proper decisions made just four years ago.

Now we have H.R.3334 representing the most advanced state of technology in computer telecommunications, but still being opposed by the same Allen Roberts, for whatever his reasons, but assuredly his reasons are not those of the people he is payed to serve. The track record of both Mr. Thomas and Mr. Allen are suspect and for this, and other reasons, we come to you as representatives of those citizens we intend to protect. H.R.3334 must be passed without further delay.

I have enclosed letters from Mr. James Burnley, then The Deputy Secretary of Transportation and M. Cynthia Douglass the current Administrator of RSPA. Don't let this disastrous history be repeated.

STATEMENT OF FORMAL RECOGNITION AND ATTENDANT UNDERSTANDINGS

Section 109(d)(2) of the Hazardous Materials Transportation Act, 49 U.S.C. 1808(d)(2), requires the Secretary of Transportation to establish and maintain a central reporting system and data center to provide law enforcement and firefighting personnel, and other interested persons and government officers with information and advice necessary to meet emergencies associated with the transportation of hazardous materials.

The responsibility for carrying out this requirement has been delegated to the Administrator, Research and Special Programs Administration (RSPA), 49 CFR 1.53(e). Under the authority of 14 U.S.C. 141(a), the United States Coast Guard is providing assistance, through the National Response Center (NRC), to the RSPA in carrying out this responsibility.

The Chemical Manufacturers Association, Inc., (CMA), on behalf of the chemical industry, currently maintains CHEMTREC, a well known and frequently utilized central emergency response service which provides law enforcement and firefighting personnel, carriers, and others with information and assistance for dealing with emergencies involving chemicals and trade name products and other hazardous materials.

On this date, March 13, 1980, the Administrator of the RSPA formally recognizes CHEMTREC, owned and operated by the CMA, as a source of case-by-case telephonically issued information and advice to public and private bodies and organizations and other persons confronted with chemical and other hazardous material emergency incidents. The Department of Transportation (DOT) and the CMA intend and expect that the NRC and CHEMTREC will cooperate in collectively providing the system and data center required by 49 U.S.C. 1808(d)(2).

This statement includes the understandings attendant to the formal recognition. Neither the formal recognition nor the understandings may be construed as creating, modifying, or in any way affecting either (1) the rights, duties, or obligations of the DOT or any of its agencies or the CMA or any other person, or (2) the liability of the DOT or the CMA as between themselves or to any other person.

The following understandings are attendant to the formal recognition.

1. CHEMTREC will notify the NRC promptly upon receipt of information concerning significant incidents and emergencies involving hazardous materials or hazardous substances.

2. The NRC will notify CHEMTREC promptly of any incident or emergency when:

   a. the person reporting the incident or emergency requests such a notification;
   b. the NRC decides that the person reporting the incident or emergency needs information or advice which may be available through CHEMTREC; or
   c. the NRC decides that the incident may be of interest to CHEMTREC.

3. Neither CHEMTREC nor the NRC can verify the accuracy of information or reports which they receive and must rely on data and information which they are given.

4. The responsibility of any person, under any statute, regulation, directive, or order to report a discharge, release, incident, or emergency is not satisfied by a report to CHEMTREC, even where that report is transmitted to the NRC by CHEMTREC.

5. The DOT and the CMA intend to work toward long-term goals relating to hazardous material incident and emergency response, including but not limited to:

   a. the continued improvement of liaison between the NRC and CHEMTREC and with other industry and government bodies or organizations which have emergency response responsibilities and capabilities, consistent with applicable statutes, regulations, executive orders, and directives;
   b. the continued improvement of communication equipment and related systems, consistent with applicable legal authority and available resources; and
   c. procurement of additional resources by the DOT and the CMA to enhance the capability of their respective centers, consistent with applicable legal authority and available funding.

Howard Dugoff
Administrator
Research & Special Programs Administration
U.S. Department of Transportation

Signed and acknowledged.

Robert A. Roland
President
Chemical Manufacturers Association, Inc.

RESOLUTION

WHEREAS, fire fighters respond to hazardous materials incidents in greater number each year, and

WHEREAS, many fire fighters have been exposed to hazardous materials during the course of such duty, leading to cancer and other occupational diseases, and

WHEREAS, many hazardous materials incidents have not been properly reported in accordance with federal law, and such under-reporting masks the true severity of the hazardous materials problem facing fire fighters today, and

WHEREAS, many times these exposures and lack of reporting have been directly related to inadequate response from the Chemical Transportation Emergency Center (CHEMTREC), which, contrary to the belief of many fire fighters and fire departments is not an agency of the U.S. Government but a subsidiary of the Chemical Manufacturers Association (CMA), and

WHEREAS, CMA CHEMTREC is the only source of support listed in the U.S. Department of Transportation Emergency Response Guidebook (DOT ERG), which is the primary source of information utilized by fire fighters at hazardous materials incidents, and

WHEREAS, the United States Federal Government has had for several years a National Response Center (NRC) for hazardous materials incidents that has a toll free 24-hour 365 day phone number and provides direct connection to not only CMA CHEMTREC but to Environmental Protection Agency and Coast Guard Emergency Response Teams, Department of Defense Emergency Ordinance Disposal Teams, Department of Energy Radiation Response Teams and the Center for Disease Control National Institute for Occupational Safety and Health, and other agencies, and

WHEREAS, such additional support from the NRC would serve to reduce the exposures of fire fighters and assure that proper medical care is afforded those fire fighters who are exposed to chemicals, and

WHEREAS, proper reporting would assist fire departments in justifying the need for properly trained and equipped hazardous materials teams, and

WHEREAS, since the establishment of the NRC, EPA has formally asked DOT to substitute the NRC number for that of CMA CHEMTREC in the DOT ERG, and

WHEREAS, the IAFF has supported the EPA request by demanding that DOT replace the CMA CHEMTREC reference and telephone number with the NRC reference and telephone number in the DOT ERG, and

WHEREAS, DOT has thus far refused to do so, in large part based on testimony from certain chiefs who by virtue of affiliation with the International Association of Fire Chiefs (IAFC) claim to represent the fire service, but who from their testimony appear to better represent the interests of the chemical industry, therefore be it

RESOLVED, that all IAFF affiliates demand that their fire departments immediately stop utilizing CMA CHEMTREC as currently listed in the DOT ERG but instead call the NRC (1-800-424-8800) to access all organizations and agencies, and be it further

RESOLVED, that all IAFF affiliates ask that their fire chiefs inform the DOT and IAFC of this policy and demand that the IAFC join the IAFF in supporting that this change be made a part of the DOT ERG.

HWIBCD10.54

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 23 1983

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

William Harsha, President
William Harsha & Associates, Inc.
P.O. Box 24157
Washington, D.C. 20024

Dear Mr. Harsha:

I am responding to your letter of October 28 to the Administrator. We are aware of the National Academy of Sciences' (NAS) study and its recommendations for a national strategy for the transportation of hazardous materials. As you know, most of the recommendations are directed to the Department of Transportation (DOT). If you have any questions about the issues raised in the study, I suggest that you write Mr. Alan I. Roberts, Associate Director for Hazardous Materials Regulation, U.S. Department of Transportation, 400 7th Street SW, Washington, DC 20590, or call him on 202-426-0656. We have worked very closely with Mr. Roberts and his staff to develop regulations for the transportation of hazardous wastes and hazardous substances.

I understand that the overall purpose of TRACREP is to provide a computerized information system for manifesting, tracking, and reporting of hazardous materials and wastes. As you know from meeting with Mr. Rolf Hill of my office, EPA neither tracks nor compiles information on hazardous waste shipments on an individual basis. Under the manifest system which EPA has developed, generators are not required to send copies of hazardous waste manifests to either State or Federal agencies. Rather, the Federal regulations require a generator to report only those instances or exceptions in which he does not receive a signed copy of the manifest from the facility designated on the manifest. For this reason, the usefulness of TRACREP to EPA is limited. However, generators and some States do track individual shipments, and they may have an interest in your system. I would encourage you to contact State agencies, and I have enclosed a list of State Solid and Hazardous Waste Agencies for your use.

Mrs. Carolyn Barley has replaced Mr. Hill as the lead for my office on manifest issues. While Mrs. Barley has discussed the TRACREP system with Mr. Hill, she believes that an additional meeting or telephone call is necessary before we can complete our review of the manifest information which will be used in TRACREP. I have asked Mrs. Barley to call you.

You should also be aware that in early 1984, EPA plans to finalize regulations requiring the use of the Uniform Hazardous Waste Manifest. When this regulation becomes effective, TRACREP will need to comply with the Uniform Hazardous Waste Manifest format.

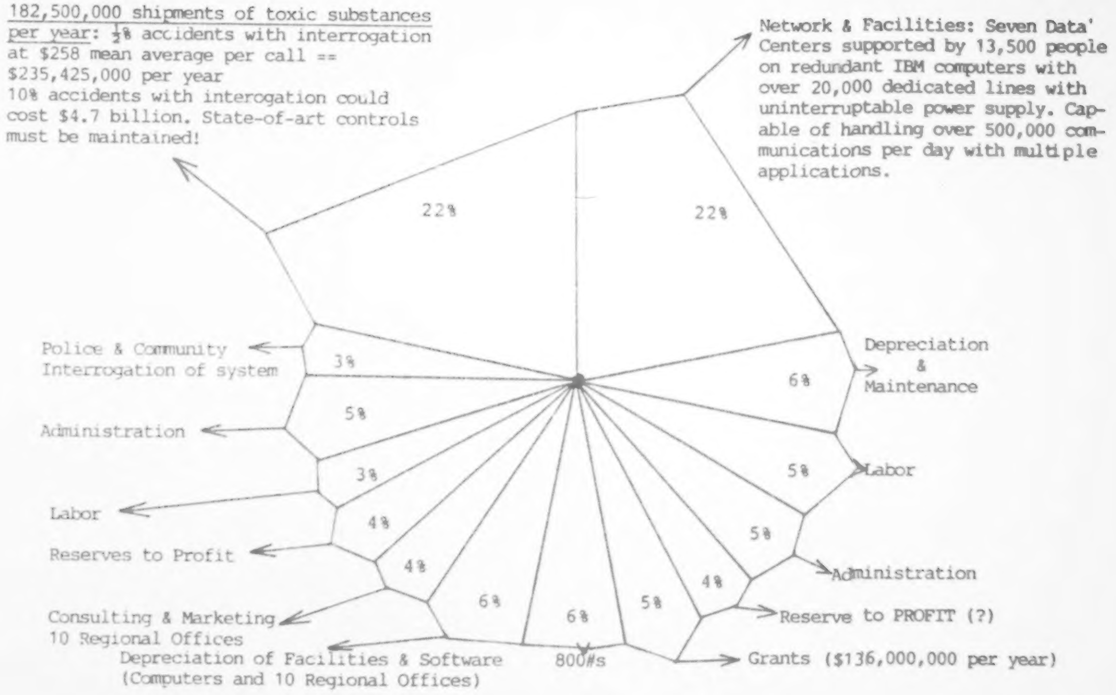
Thank you for your interest in EPA's national program to manage hazardous wastes.

Sincerely yours,

Lee M. Thomas
Assistant Administrator

Enclosure

cc: Alan I, Roberts, DOT



182,500,000 shipments of toxic substances per year: ½% accidents with interrogation at $258 mean average per call == $235,425,000 per year
10% accidents with interogation could cost $4.7 billion. State-of-art controls must be maintained!

Network & Facilities: Seven Data' Centers supported by 13,500 people on redundant IBM computers with over 20,000 dedicated lines with uninterruptable power supply. Capable of handling over 500,000 communications per day with multiple applications.

22%
22%
Police & Community
Interrogation of system
3%
Administration
5%
3%
Labor
4%
Reserves to Profit
4%
Consulting & Marketing
10 Regional Offices
6%
Depreciation of Facilities & Software
(Computers and 10 Regional Offices)
6%
800#s
5%
Grants ($136,000,000 per year)
4%
Reserve to PROFIT (?)
5%
Administration
5%
Labor
6%
Depreciation
&
Maintenance

U.S. Department of Transportation
Office of the Secretary of Transportation

The Deputy Secretary

400 Seventh St., S.W.
Washington, D.C. 20590

July 20, 1987

Mr. William G. Handfield
Lauglin, Halle, Gibson & McBride
Suite 1000
1612 K Street, N.W.
Washington, DC 20006-2802

Dear Mr. Handfield:

Thank you for your letter suggesting that I meet with you and Mr. John F. Mulholland and view a video tape prepared by Source Data Network, Inc. I have discussed this matter with Associate Deputy Secretary Dorn, who met with you and Mr. Mulholland and viewed the video tape presentation, and Research and Special Programs Administrator Douglass, who has met with you and Mr. Mulholland several times but has not viewed the video tape presentation.

Within the Department, the Secretary has assigned responsibility for hazardous materials transportation to the Research and Special Programs Administration (RSPA). Any person desiring addition of new regulatory requirements is afforded an opportunity to petition for rulemaking. The RSPA Administrator has advised you how best to proceed with your proposal in her office on May 16, 1986, and again in Congressman Applegate's office on June 11, 1986. Since any initial action, including technical assessment and impact analyses, would be taken by RSPA, I believe Ms. Douglass should be fully apprised of the proposal and be afforded an opportunity to view the video tape presentation before further review is initiated elsewhere in the Department.

Thank you for bringing this matter to my attention and for your interest in the safe transportation of hazardous materials.

Sincerely,

Jim Burnley

Jim Burnley

US Department
of Transportation

**Research and
Special Programs
Administration**

The Administrator

400 Seventh Street, S.W.
Washington, D.C. 20590

MAY 8 1986

The Honorable Douglas Applegate
House of Representatives
Washington, D. C. 20515

Dear Representative Applegate:

You wrote to Secretary Dole concerning the discharge of our responsibilities under Section 109(d)(2) of the Hazardous Materials Transportation Act. The Department views the responsibilities mandated by this section of the Act in support of emergency response as twofold: first, to make immediate pertinent response information available to firefighters and others responding to hazardous materials incidents as they occur, and second, to provide historical data, system performance data, planning guidance and training to prepare responders for hazardous materials incidents should they occur.

The first function is met through the Department's participation with CHEMTREC, the industry-operated Chemical Transportation Emergency Center. In 1980, the Department of Transportation by a Statement of Formal Recognition joined with CHEMTREC to provide information to state and local officials concerning chemical and hazardous materials emergencies. The National Response Center (NRC), operated by the Coast Guard, and CHEMTREC, provide a coordinated and data-linked information system and data center of unique value in coping with accidental chemical emergencies. This service is free of charge to the users of the service.

The Congress recognized the benefits of this joint effort by private industry and the Department in the Act authorizing appropriations for fiscal year 1985. This Congressional action clarified any question that the Secretary had the authority to enter into a contract with a private entity to fulfill its mandate under section 109(d)(2) without duplicating the effective efforts of CHEMTREC.

The second function is met in part by the Department's Hazardous Materials Information System (HMIS), a computerized information system containing historical system performance data on hazardous materials incidents. The HMIS is used extensively in RSPA's regulation, enforcement and emergency response support efforts, and is also used by some 30 state and federal agencies, other than RSPA, who have direct access to the system. Numerous individual requests for information from local, state and federal executive and legislative offices are also processed.

The Safety Review Task Force has recommended specific improvements to the HMIS which RSPA supports and is moving to implement. These include codification of existing HMIS procedures, reassessment of the kind and amount of data collected and computerized, coordination with other available data bases, and expansion of analytical applications. As the Task Force notes, many of these improvements, such as the overall review of reporting requirements and the amount of collected data which should be computerized, were undertaken prior to their review. Other Task Force recommendations urge a greater expansion of HMIS applications and an expansion of the HMIS user community, which RSPA supports.

The Safety Review Task Force believes that the CHEMTREC/NRC emergency response information system and the HMIS have generally worked well. I share that belief and intend to continue to have an effective, efficient central reporting system in place.

I am prepared to meet with you or your staff should you desire additional information on our current programs and future plans.

Sincerely,

M. Cynthia Douglass

American College of Emergency Physicians
Post Office Box 619911
Dallas, Texas 75261-9911
214/550-0911

October 26, 1987

The Honorable Douglas Applegate
U.S. House of Representatives
2183 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Applegate:

The American College of Emergency Physicians commends you for introducing the "Hazardous Materials Transportation Amendments of 1987" (H.R. 333[illegible]). We wholeheartedly support your intent to improve hazardous materials transportation safety. The College believes that emergency physicians and emergency medical services (EMS) personnel have the right to immediate access to all information needed to treat victims of hazardous materials accidents and to prevent further exposure to others.

We feel H.R. 3334 will help us achieve this objective and would be strengthened by specifically incorporating EMS personnel in the language of the legislation. In Section 2, we recommend that all references to data access by law enforcement and firefighting personnel be expanded to include emergency medical services personnel. In addition, under Section 116.(c), we request that the Secretary be directed to consult with the American College of Emergency Physicians in "establishing quidelines for training programs" under a grant under subsection (a) for EMS Systems personnel to make emergency responses.

The more than 11,600 emergency physicians we represent are trained to evaluate and manage every conceivable medical emergency. Obviously our opportunities to successfully treat the victims of hazardous materials transportation accidents are increased significantly when we have all available information at our disposal.

On behalf of the College's membership and the 80 million patients we serve each year, we thank you for introducing H.R. 3334 and we urge you to give favorable consideration to the amendments we recommend.

Sincerely yours,

Michael E. Ervin

Michael E. Ervin, MD, FACEP
President

MEE/sb

cc: Anne M. Grady, Legislative Assistant

1987 Scientific Assembly
November 2-5
San Francisco California

Michael E Ervin MD FACEP President
Michael J [illegible] MD FACEP President-Elect
[illegible] MD FACEP Vice President
Earl Schwartz MD FACEP Secretary-Treasurer
Richard L Stennes MD FACEP Past President

T Jackson Allison Jr MD FACEP
Robert H [illegible] MD FACEP
Larry J Baraff MD FACEP
Pamela P Bensen MD FACEP
John C Johnson MD FACEP
Joseph D McKean Jr MD

Ellen H Taliaferro MD FACEP
Michael C Tomlanovich MD FACEP
John R Lumpkin MD FACEP Speaker
Tina M H Blair MD FACEP Vice Speaker

Colin C Rorrie Jr PhD Executive Director

Operating With Information Systems During An Emergency

By James W. Morentz
John B. Gargett

In 1981, during hearings on emergency management sponsored by then-Congressman Albert Gore, Jr., James Morentz, President of Research Alternatives, concluded his testimony with the admonition:

> Unless a consistent policy and program for using information technology in emergency management is developed, three years from now emergency programs in the localities in this country will not be as well managed as a local barbershop or as a local butcher shop. Inexpensive computers will have made such an impact on small business that even the smallest will have more knowledge and more analytical power at their fingertips than the office that is charged with protecting the entire jurisdiction from catastrophe and leading the community survival from a nuclear attack.

His warning was half right. Barbershops and butcher shops may have advanced computational and analytical tools. However, even without any form of consistent program to promote computer use in emergency management -- and in spite of considerable foot-dragging among policy organizations -- emergency management agencies all across the country have turned to automated tools.

As the purpose of this testimony is to offer stimulus for reflection and further discussion, let me highlight several innovative applications that have been put in place in the Commonwealth of Pennsylvania. These applications bear witness to the creative present and unlimited future of information technology applications in emergency management.

The Pennsylvania Emergency Management Agency began its automation efforts with a single portable computer and the text version of the Emergency Information System (EIS). When devastating tornadoes struck the state, the need for further automation was evident. Within days of the disaster, using emergency authorities, the Agency had purchased and installed IBM computers and the mapping version of EIS. In the following months, a six-computer network was installed in the PEMA Emergency Operations Center and a statewide mapping project was begun.

In the nearly four years since the tornadoes, the state EOC has developed to more than 30 computers on its network and a map inventory of thousands of maps extending from county road maps to floorplans of high-risk buildings. In addition, three PEMA Area Offices have networks and more than 30 of the Pennsylvania counties have computers and EIS software. In the process, Pennsylvania has led the way for all emergency agencies in its support of technology applications. Among these are:

- Chemical manufacturing site planning with detailed maps of vulnerable zones and chemical locations.
- Radiological Emergency Response Planning around nuclear powerplants with evacuation routes, traffic control points, risk populations, and even steamcycle schematics to explain what is happening inside the plant.
- Special emergency needs (schools, hospitals, nursing homes) and a general population census that allow demographic information to be retrieved for any emergency scene.
- Rainfall and river gauges, linked to a Proactive Flood Monitoring program to display inundation area projections based on river gauge forecasts.
- Evacuation requirements modelling to identify transportation and resource needs for evacuation of special care facilities using block-by-block maps in heavily populated areas.
- River corridor mapping of water-use facilities and requirements for both contamination prevention and capacity replacement.
- Inventory and map display of cattle herds and milk processing plants within the 50-mile ingestion pathways of five nuclear powerplants.
- Satellite communication system for complete electronic data and map transfer and emergency warning system.
- Plume dispersion models and emergency response procedures for the accidental release of more than 2,500 toxic chemicals.
- Emergency plans, from state management plans to fire department standard operating procedures, integrated in a single automated format for retrieval of exactly the right operational guidance at the right place and time.
- Counter-terrorism plans and detailed mapping of airports, historic areas, and government facilities.

All of these decision-support tools are available on computers through the PEMA EIS network and on large (6' x 8') projection display screens in the command center, as well as viewed from a quiet, glass-enclosed Governor's Briefing Room used for executive deliberations.

These tools are used, every day, in real emergencies and exercises. The system has aided the evacuation of more than 20,000 people on successive weekends because of hazardous materials spills. It was used for 12 days non-stop during 24-hour operations in a massive oil spill in the Ohio River. And, it has weathered tornadoes, floods, and hurricanes.

While these technological advancements are impressive, full utilization of the computer in emergency response is dependent upon accurate, factual and timely information. No single hazard more clearly points this out than the transportation of hazardous materials. At present, there exists little or no effective legislation at the federal level for the regulation of hazardous chemical shipments. Title III of the 1986 Superfund Amendments and Reauthorization Act, the most sweeping piece of emergency planning legislation ever passed, specifically exempted transportation and temporary storage of hazardous materials. Technically, the emergency which arose after the Ashland Oil spill in Pennsylvania was a situation where emergency planning was not required under SARA Title III. Fortunately, the officials of Ashland Oil were a model of cooperation. They provided accurate, factual and timely information. This may not be the case when a tanker truck or rail car are involved in an accident.

Pennsylvania, while the leader, has been joined by several other states -- most notably Washington and the New Jersey State Police. All three have formally adopted EIS as the state standard for emergency planning. In addition, there are over 250 county and local government emergency agencies across the nation using EIS software. This is a long way from just a few years ago when an electric typewriter was a rarely found technology among emergency managers.

The emergency management profession clearly is one in which the application of computing and communicating technologies is bearing fruit now while holding promise for even more exciting gains in the future.

Biographical notes about the authors

James W. Morentz
President, Research Alternatives, Inc....longtime focus on fuller use of computers and telecommunications in augmenting society's ability to plan for and cope with natural and technological emergencies...developer of computerized evaluation system for international disaster relief performance, an automated index of disaster assistance programs, and a proprietary computer graphic software called the "Emergency Information System"...publisher of *Hazard Monthly*...writer and lecturer on broad spectrum of EM topics.

John B. Gargett
Vice President, Emergency Systems, Research Alternatives, Inc.... brings wealth of local emergency response experience to EIS system design, mapping interfaces, and applications training... maintained direction and control operations during hazardous materials emergencies, floods, and search and rescue missions in State of Washington ... has a strong background in earthquake planning and has specialized in the design and development of geographic information systems for emergency management.

SOURCE DATA NETWORK,
Rockville, MD, 20850.

Re: the critique of H.R. 3334 by the Chemical Manufacturers Association, here is a digest of the response to technical questions by Paul Fingerman, Ph.D., Manager, Solution Design Team of Boeing Computer Services in his letter of March 22, 1988 to John Mulholland, President of Source Data Network, Inc.

DIGEST OF RESPONSE BY PAUL FINGERMAN, PH.D. TO CRITIQUE OF H.R. 3334 BY C.M.A.

1. How does the design provide for maintaining complete information about the contents of a shipping container?

The primary entry of data into the system is by the shipper or generator, who fills out the electronic equivalent of a manifest. If the carrier moves the cargo from its original vehicle to another one, the carrier acts as receiver for the original shipment and then opens a new manifest record for the cargo in the new vehicle.

2. How does the public safety officer (PSO) request of the central computer system the contents of a vehicle in case of an accident?

Two primary ways—

a) To receive the manifest from the driver/pilot/captain if the latter can produce it. Then the PSO, accessing the central data base, can verify the information and obtain it in machine-readable form (downloaded, for example, to his portable computer from which it can be cross-loaded into a local Emergency Response System computer). Being able to confirm the physical manifest is also important to law enforcement officials checking for illegal cargoes, making sure the shipment was properly registered in the central data base.

b) If the physical manifest is not available for any reason, a vehicle identifying number (license plate, trailer number, rail car number) is used. In a multi-trailer system, either number will suffice, for linked shipments are recorded as well. The same holds true for rail cars; the number of a single car in a train allows him to retrieve the entire set of manifests for all cars in the train.

Multiple license plates or vehicle numbers are no problem. A few seconds are lost as the PSO enters all numbers available to him; wrong numbers send back the signal "no manifest". The correct number gives back the carriers name, origin and destination of the shipment to the incident location; also the general characteristics of the cargo relative to observations on the scene help verify that the correct manifest has been retrieved.

3. How can a manifest be retrieved if the vehicle identification number cannot be read?

a) In the case of a multiple-vehicle assemblage, as noted above, the number of a single vehicle in the group (trailers or train) brings manifests for all units. Thus cargo contents can be determined by the process of elimination.

b) In the case of a single vehicle the PSO accesses the central data base with the facts as he sees them—kind of carrier, vehicle type, containers in the shipment (drums, crates, etc.) material characteristics (liquid, solid) etc. While such a retrieval would take somewhat longer (minutes as compared to the response time of seconds of a retrieval by vehicle number) it would be extremely short in comparison with todays standards, usually hours.

4. What happens to the paper manifest in use today? Does the system save money for the shippers and carriers?

Properly used, the system would save its user money. Many, indeed most, manifests coming into the central data base will come from automated systems already in existence. Thus, the incremental cost of passing this information to the central data base is quite small. There no automated system exists, the design permits, even aids, the user to develop one, for example, on a micro-computer or to enter manifest information orally over telephone voice lines to operations at the central data base. To the nations citizenry, inestimatable savings are to be made with the improved ability of public safety organizations to respond to emergencies, and of communities to regulate what material passes through or near such communities.

5. How does the system protect the data from unauthorized access?

Present state-of-the-art techniques, now used extensively by government, business and industry to protect private, sensitive and proprietary data are available and proven. The Source Data Network system and physical security measures would be subject to inspection and audit by competent representatives of prospective clients.

CRITIQUE OF THE H.R. 3334/SOURCE DATA NETWORK PROPOSAL

Representative E. Douglas Applegate (D-OH) and Source Data Network have proposed ". . . a nationwide computer and telecommunications system" to provide information on shipments of hazardous materials and hazardous wastes. The proposed system would attempt to accomplish this by requiring all shippers and generators of these materials to complete an electronic manifest in a central computer system that could be accessed by local emergency response and law enforcement officials. The system would be supported by a $12 per/shipment fee on shippers.

While this proposal appears simple in concept, and may be appealing to local emergency response organizations, it is a fundamentally flawed program because it does not consider the complexities of the transportation system. The proposed nationwide electronic manifest system is unworkable and would not provide a useful service to emergency responders.

The following are specific problems with the system proposed by the Source Data Network (SDN) and H.R. 3334.

There is no provision in the bill or SDN proposal for carriers to enter data into the system. Shippers are required to enter data into the system, yet in many cases the vehicle, tank car, tank truck, freight container, box car or trailer used will be determined by the carrier. Without the entry of data by the carrier the system will, at best, contain only partial information but will more likely contain the wrong information about the contents of a container.

For example, a shipper might send a package of hazardous material from Chicago to Los Angeles by a common carrier. The carrier would pick up the package from the shipper's facility and take it to a "break bulk terminal". From that point it would be consolidated with other freight in another trailer. The product might change trailers 2-3 times before arriving in Los Angeles. For the proposed system to work, the carrier would have to update the original entry by the shipper each time the product changes vehicles. If the system is not updated each time a package is moved from one vehicle to the next, the user would obtain the wrong information about a shipment when querying the computer. That could result in a serious miscalculation of the proper response to an accident.

Access to data in the central computer is totally dependent on the user being able to determine the correct vehicle identification number. The sponsors of this proposal do not understand the multiplicity of numbering systems the might appear on a vehicle. If the wrong vehicle identifier is entered then the wrong chemical information will be retrieved. Even with railroad tank care which have a unique identification system, the cars have other numbers that might be erroneously used.

For example, a state trooper attempting to use the proposed system would enter a license number from a passing truck to determine its contents. The shipper would have entered the vehicle number into the manifest before it left the plant. Most tractors have several state licenses, and the tractors and trailers almost always have different license numbers. Some states use unique registration numbers. Which number does the shipper choose? If the state trooper does not choose the same number as the shipper he will either not be able to identify the system or worse, will identify the wrong material and make an inappropriate and perhaps dangerous response.

Vehicle identification numbers may be obscured in an incident or it may be unsafe to approach the vehicle to obtain the number. No information could be retrieved from the proposed system without the unique vehicle number. The existing system has redundant means to identify the product. CHEMTREC's watch officers have the experience to determine the product identity using, those redundant means and can provide that experience to the on-scene emergency reponse personnel. Without CHEMTREC, emergency responders could obtain the wrong or no information.

For example, if a tank truck rolled over and was involved in a fire it would probably be unsafe to approach the rig and obtain a tank identification number. In that case only a good communications link between the carrier, shipper and emergency responder will provide the needed information. Only CHEMTREC provides that commmunications link. Sponsors of H.R. 3334 do not include communications with the shipper as part of their program.

The proposed system would replace the existing paper manifest kept with the shipment with an electronic version of the manifest. The sponsors claim a net savings in preparing an electronic manifest vs. one that goes with the shipment. If that claim is valid, it is reasonable to assume that shippers would no longer prepare the paper copy to go with the shipment and there would be no way-bill or manifest in the vehicle. If on the other hand, shippers and carriers are still required to keep manifests and way-bills with shipments then there would be no costs savings, but instead there would be additional manifest preparation costs. The proposed legislation adds a regulatory burden to shippers but does not remove any of the existing legal requirements for preparing a manifest for hazardous waste shipments or bills of lading for hazardous materials shipments.

For example, a shipper of hazardous wastes would have to complete all of the state and federal manifest forms required by RCRA in addition to entering data into the SDN computer.

The data to be entered into the proposed electronic manifest could be used by competitors to obtain customer and product distribution information. This data when provided on a shipment by shipment basis, would not reveal product marketing strategies but it aggregated into a central file would provide competitors, foreign and domestic, with enormous opportunties to determine potential customers and market areas. This information is considered confidential by both shippers and carriers because it takes a large amount of resources by marketing divisions to develop a customer. The sponsors have indicated that this kind of information would not be protected.

Section (B)(iv) of H.R. 3334 requires that the central reporting system "adequately protect proprietary data transmitted to the system" but Section (C)(i) of the same bill requires the private entity to "provide access at all times to data in the central reporting and data center, at no cost, to law enforcement and fire fighting personnel of communities and other interested persons and government officials." Conversations with SDN officials indicate they do not consider any information about hazardous materials shipments to be proprietary.

The portion of the proposed funds to be generated by the user fee and redirected to train emergency responders would be used to provide terminals and telecommunications equipment for the emergency services. Purchase of this equipment would use most of the $135 million earmarked for training. Very little, if any, of the funds promised for training could actually be provided because most of the money would have to be spent for terminals and communications equipment.

For example, if the training portion of the fund was used to provide an average of 10 terminals for each of the 10,000 police and fire organizations, and if a terminal; and communications equipment necessary to obtain access to the central system could be provided for $1,200 each, then the total cost would be $120 million. Using these conservative estimates of equipment costs, only $15 million would remain for training.

In the final analysis, the "private entity" stands to make a vast amount of money on this proposal and because of inadequate consideration of the complexity of the transporation system, the proposal would do little to improve safety. Using the SDN estimates, that firm would bring in revenues of $2.5 billion per year and hope to make a profit of $100 million per year (4% profit) regardless of the ability of the system to deliver on its promises.

Boeing Computer Services,
Vienna, VA, March 22, 1988.

Mr. John Mulholland,
Source Data Network,
Rockville, MD.

Dear John: Per your verbal request, here are my responses to your technical questions regarding our preliminary design for a hazardous waste/materials tracking system.

1. How does the design provide for maintaining complete information about the contents of a shipping container?

The primary entry of data into the system is by the shipper or generator, who fills out the electronic equivalent of a manifest ("opens a manifest record" in the jargon). This manifest record includes information on the carrier, including the number of the vehicle, rail car, barge, airplane, etc. It is the case, however, that the shipper may not have complete knowledge of what the carrier will do (intends to do) with the shipment. For example, the carrier may transport the shipment to a way point, where it is broken up into smaller shipments to different destinations, consolidated with other shipments to a common destination, etc. Alternatively, the carrier may find it necessary to move the shipment from the original trailer to a new one due to mechanical difficulties, etc. Further, the carrier often assembles the shipping vehicle into a larger assembly (a set of car for a train, or a pair or triple of trailers for a tandem rig).

In the first case (breaking up a shipment, or consolidating one), in the view of the system we have designed, the shipment (and manifest record) should be closed whenever there is a change in the contents of the shipment. In the case of breakup, the carrier acts as receiver for the original shipment, closing the manifest record for it, and then as the shipper for the new groups. As such, he must open new manifest records for each new, smaller shipment. In the case of substitute vehicle, the carrier must take the responsibility of updating the open manifest record, either directly, or by notifying the shipper to do so. In the case of assembly of shipping vehicles, the carrier is expected to enter such information in the central database, and to keep it up to date, if the shipper is/was unaware of it.

The design of the system accommodates all three kinds of events, both in terms of the network requirements (e.g., "break-bulk terminals" must be on the communications network for the system, and have communicating terminals), and the necessary programming to permit updates to the carrier vehicle portion of an open manifest, or to the vehicle assemblage records. Without such capabilities, the system would not be of much value, and, in fact, might be dangerous, since it would not accurately reflect the contents of various shipping containers/vehicles. One aspect of this requirement must be dealt with external to the data processing system solution: the shipper, upon whom the burden for information in this system is placed, must transfer part of that responsibility to the carriers he deals with, by contract or otherwise, to guarantee that the carrier does his part in maintaining the integrity of the data in the system.

2. How does the public safety officer (PSO) request of the central computer system what the contents of a vehicle are in case of an incident?

There are at least two primary ways. If the driver/pilot/captain, etc. of the vehicle can produce a manifest, the manifest should include the number assigned by the central computer system. The PSO may use this number to access the central database, though, when he is in possession of the physical manifest, the only value of the central database is to verify the information, and obtain it in machine-readable form (downloaded, for example, to his portable computer, from which it could be cross-loaded into a local Emergency Response System computer). The ability to confirm the physical manifest is also important in enforcement actions, making sure that the shipment was properly registered in the central database.

Historically, we know that the availability of the physical manifest on the scene is problematic, and one of the primary stimuli for the system you have asked us to design. In this case, open manifest records in the central database may be accessed by a vehicle identifying number. In the case of a trailer from a tractor/trailer combination, a license plate number will suffice; in the case of a multi-trailer system, either trailer number will suffice, as linked shipments are recorded as well. The same holds true for rail cars: the rail car number for a burning car would allow a PSO to access the manifest, and hence, the contents; the number of an adjacent car would also lead him to the necessary information. The number of any care in the train should allow him to retrieve the entire set of manifests for all cars in the train.

Similarly, although more simply, the Coast Guard number for a barge or the FAA tail number for an aircraft would allow the PSO to retrieve the manifest information from the central database.

It is possible that in some instances erroneous vehicle identification numbers might be used by the PSO to retrieve a manifest. For example, some trailers carry license plates from multiple states. The carrier or shipper may have entered the license number from state 1 on the manifest, while the PSO reads and enters the license number from state 2. Such a happening is not dangerous other than the loss of a few seconds, since the license number from state 2 will not be associated with any manifest (especially not with a manifest for another shipment). When the system signals "no manifest," the PSO can try another. If, perchance, the PSO enters a license number with some other kind of error in it, the remaining information on the electronic manifest helps to validate that it is the correct manifest for the system in question. For example, the carrier's name, the origin and destination of the shipment relative to the location of the incident, and the general characteristics of the contents relative to observations on the scene all help to verify that the correct manifest has been retrieved.

Ideally, the instructions to the shippers, carriers, and PSOs will remove as much uncertainty from this process as possible, so as to minimize the error rate. Of the two kinds of errors (failure to retrieve a manifest, and retrieving the wrong manifest), intrinsic system characteristics make the latter almost impossible (as argued above), while errors of the first type will be minimized by careful and consistent data entry procedures.

3. How can a manifest be retrieved if the vehicle identification number is obscured,

The presumed scenario here is a burning vehicle, where the license plate or rail car number is obscured. In the case of a multiple-vehicle assemblage, as noted above, the number of any vehicle in the assemblage would be sufficient to retrieve manifests for all of the vehicles. By noting the visible vehicle numbers, one could determine the contents of the obscured vehicle by the process of elimination.

Should the vehicle not be part of an multiple-vehicle assemblage, retrieval would still be possible in many circumstances. For example, manifests can be retrieved by carrier, vehicle type (truck, train, etc.), shipping containers in the shipment (drums, crates, etc.), shipping material characteristic (liquid, solid), and so on. While such a retrieval would take somewhat longer (than the 1-5 second response time of a retrieval by vehicle number), it would still be extremely short by comparison with today's standards (hours). The result of such a retrieval would usually be a single manifest, whose contents would be treated as "probably, but less than 100%, and needing verification" by the PSO on the scene. Occasionally, such a search would retrieve two or more manifests; in such an instance, use of the origin/destination information will usually reduce the set to one. If not, the phone number of the carrier and shippers contained on the manifests could be used to get additional information to nail down the proper manifest and data. In any event, the time elapsed in the worst case would be far less than the time elapsing in similar incidents today.

4. What happnes to the paper manifest used today? Does the system save the shippers and carriers money?

Properly used, the system would save its user money, excluding the cost of dealing with accidents. The way-bill/manifest that is already required contains redundant information relative to the electronic manifest, so the natural solution is to produce all in a single system. For example, conversations with one midwest shipper suggested that it would be quite simple for him to add a component to his present automated shipping-manifest/way-bill system, that would also communicate with the central database to produce the electronic manifest; the central system would then download the manifest number to the shipper's system to complete the cycle. For shippers who are presently manually preparing way-bills/manifests to meet existing requirements, any system prepared to meet the requirements on an electronic manifest should be able to do the others as well for minimal incremental cost, thus providing him with three automated functions for the price of one.

Thus, the preliminary design we have prepared assumes that many, indeed, most manifests coming into the central database will come from automated systems that are already in existence. Thus, the incremental cost of passing this information to the central database is quite small. Where no automated system exists, the design permits (even aids) the user to develop one, for example, on a micro-computer, or to enter manifest information orally, over telephone voice lines to operators at the central database.

Finally, in considering whether the system saves money, the improved ability of public safety organizations to respond to emergencies, and of communities to regulate what passes through their communities constitute the major savings. While perhaps difficult to estimate, they are probably an order of magnitude higher than the additional burden the system places on shippers.

5. How does the system protect the data from unauthorized access?

Obviously, access to the data in the system by competitors etc. must be protected against. While total security is inconsistent with the other requirements defined for the system, we have employed state-of-the-art techniques to obstruct unauthorized access, and to make it detectable if it should occur.

Three classes of users are defined in the system design. The first class are the "data-enterers." These include shippers, carriers, and receivers. None of these users can see materials data other than what they might be entering at the time. For example, the shipper originates a manifest, and enters data on the shipper, carrier, and receiver, as well as data on the material being shipped. Should the shipper retrieve the manifest at some later date, he could only see data on the shipper, carrier, and receiver; data on the material shipped would be protected. Similarly, when a manifest is retrieved by a carrier or receiver, only shipper, carrier, and receiver data would be visible. To close a manifest, the receiver would enter fresh data on the material shipped (that is, data on the material he actually received); the system would compare the original record of material shipped with the entry of material received, and generate an exception report of inconsistencies. The same would occur when a carrier had to close a manifest to reorganize a shipment.

This technique precludes the improper passing of information, as data on the shipment itself is never retrieved. The second class of system users are the "public safety officers and organizations." These users must obviously have access to the shipment portion of the manifest. They are authorized for such information (whether they retrieve it automatically from local terminals/computers, or orally from the central system telephone operators) by providing a secret password. These passwords will be disseminated from the central computer to cognizant state agencies, who will be responsible for further dissemination to the local level. They will be changed on a regular basis. An audit technique has been built into the central database system to protect against unauthorized use of passwords. On a regular basis, the system will produce a report describing statistically the number of retrievals by password, public safety organization, shipper, carrier, and receiver. These reports plus associated pattern recognition tests will be examined to seek patterns of access that do not correspond to patterns of incidents (for example, does a fire captain show an unusual interest in shipments from XYZ Chemical Co.?). Results of these audits will be regularly reported to the state agency responsible for the state's passwords.

The third class of users are "system operators." These include the telephone operators at the central site, programmers, operators, etc. These individuals will be bound by non-disclosure agreements to protect the data to which they will have more-or-less unrestricted access. Boeing has operated numerous systems for government and private entities involving the protection of private or sensitive data. Our system and physical security measures are subject to inspection and audit by competent representatives of prospective and current customers.

From our discussions, it is clear that there is another class of interested parties, those who would not use the system directly, but would be interested in reports (statistical and otherwise) based on the data the system would contain. Since such reports would be run by the "system operator" class of users, all that is required to protect proprietary system data is a screening process to preclude requests that would violate intended security procedures. For example, a committee representing parties of interest could be established to screen report requests. In addition, statistical screening for "small-cell identification" would occur; this protects against the situation where a report focuses on small frequency events, so small, in fact, that company identification might be inferable. This compares to a comparable screening performed by the Bureau of the Census on its public use files, to preclude the identification of individuals.

Naturally, all of these answers are subject to change, as the design for the system is at present still preliminary. However, I hope you will agree that we have anticipated many of your questions in our design, and that the design is rich enough to stand substantial inquiry, even in its preliminary stage. Boeing has provided a number of large, complex systems, with substantial host processing, network, and security requirements, and we feel that the requirements you have presented us with fit nicely without previous experience. If I can be of further help, please feel free to call upon me.

Yours truly,

PAUL FINGERMAN,
Manager, Solution Design Team.

Mr. **ANDERSON**. At this time, we'll stand in recess for about 15 minutes and thank the panel very much.

[Recess.]

Mr. **ANDERSON**. The subcommittee will come to order. At this time, we have a panel of Paul Donovan, vice president and general counsel, Shippers Alliance for Efficient Safe Transportation.

Daniel J. Sweeney, General Counsel of the Drug and Toilet Preparation Traffic Conference, National Small Shipment Traffic Conference.

We have your prepared statements, and they will be made a matter of record.

TESTIMONY OF PAUL DONOVAN, VICE PRESIDENT AND GENERAL COUNSEL, SHIPPERS ALLIANCE FOR EFFICIENT SAFE TRANSPORTATION

Mr. **DONOVAN**. Thank you, Mr. Chairman.

My name is Paul Donovan, and I'm general counsel and vice president to the Shipper Alliance for Efficient Safe Transportation.

At the risk of burdening you for a moment, let me list the members of that organization.

The American Waterways Operators—which is the barge line trade association.

The Association of American Railroads, which as you know is the railroad trade association.

The Chlorine Institute, which is a trade association of shippers of chlorine, one of the large-volume hazardous materials moving in the country.

Leaseway, which is the second largest tank truck operator in the country.

In addition, shippers of hazardous materials: B.F. Goodrich, CIL, Dow Chemical, the Hanlin Group, and Occidental Chemical.

Now, what brings these diverse interests together in a single coalition? The answer, Mr. Chairman, is that they all have a vital interest in the safe and efficient transportation of hazardous materials.

We've heard Bhopal mentioned many times today. The fact of the matter is that if Bhopal happened in this country, and it happened to a company that I represent, or any other company, that company no matter how big would be in Chapter 11 bankruptcy reorganization within 30 days.

We cannot afford to bet the company on unsafe transportation practices. It doesn't make sense, and it's bad business.

The safest position that I have outlined in my written statement is really quite simple. I don't want to address a particular bill or bills initially, but simply say to you, Mr. Chairman, we've heard a great deal about first responder training and the need for additional trained personnel. To the extent that that need exists—and I believe that it does to some degree—it's not a function of inadequate numbers of training programs. It's a function of inadequate incentive on the part of people responsible for having their people trained to send them to school.

A fire chief, Mr. Chairman, knows that in his city, he's going to have x number of structural fires every year. He knows that: thousands of fires. He has a limited amount of training time to put his people into a training school. He knows that maybe once every five years he'll have a serious hazardous material incident. He's going to send his people to structural fire school, not to a hazmat school.

The programs are there, and the fire chiefs will tell you that those programs go underutilized. People don't think the hazmat incident is going to occur.

We've heard a lot today about thousands of incidents. The fact is that the number of serious incidents that happen is minimal.

The system is essentially safe. To be sure, it could be improved. Everything can be improved. But it's essentially a safe system.

Equipment—your Honor, there's a temptation on the part of anybody, a city manager, a fire chief, a mayor, to have a lot of shiny, glitzy equipment around. The fact is that he may not need it. It may come out only on Fourth of July parades.

But the temptation to acquire it, particularly if somebody else is paying for it, is there. I don't mean that to sound sarcastic. It's just a natural human condition.

Safest also strongly agrees with the people who have suggested, including Edith Page from OTA, that the Federal Government must be the final arbiter of highway routing conditions. Where cargo moves and when it moves.

That is not to say that the local, municipal and State governments should not have a say in designing routes, showing the preferential routes, showing the route with the least hazards, if it's transited by truck.

But the Federal Government has to be the final arbiter. Otherwise, conflicting, confusing, and basically unsafe multiple regulations will face everyone.

We also agree with Ms. Page that driver licensing needs to be a prime concern. A driver of a hazardous materials truck has to be held to a higher standard of care and training than the driver of a truckload of steel pipe. There is just no question about that.

Mr. Chairman, those are the general safest positions. I didn't realize today that the hearing was going to become basically a hearing on H.R. 3334. I was prepared to discuss a number of bills and the concepts in those bills.

If I might, I would like to make a couple of comments about H.R. 3334.

First of all, when one examines the bill, although it's laudable in purpose, it won't work. Let's take a situation. Let's assume a derailment, one of a tank car.

Right now, Mr. Chairman, there is a toll-free number on the side of that tank car. There is a sign on the side of that tank car, and there is a name on the side of that tank car telling you what the commodity is. What a responder must do now, hopefully with a pair of binoculars, is to look at that thing to see if it's leaking.

Let's assume that it is. He finds the toll-free number, he jots it down, he sees a commodity. Let's pick acrylonitrile. He calls up Chemtrek on that number and says, I've got a carload of acrylonitrile and it appears to be leaking.

Within 10 or 15 minutes, that responder is in contact with a manufacturer of acrylonitrile who knows the properties of the chemical, who knows what its properties are when it's 65 degrees outside versus 90 degrees outside. He knows the danger when the wind is blowing or when it's raining. He knows whether you should put water on it, or whether you shouldn't put water on it.

He knows all these things. And that expert is on the other end of the telephone line. Meanwhile, there's also likely an industry response team on its way to the incident almost immediately.

Under H.R. 3334, that same person, with his binoculars, will read a 15 or 16 digit car number, punch it into the computer, and hopefully, if all the information is properly correlated, and the computer is working, and it hasn't gone off line, and everything is perfect, he will then get some written information.

Hopefully, if the computer system is perfectly designed, there will be some indication of what he should do next. But it can't possibly build in all the variables—what to do at 65 degrees versus 90 degrees, what to do when it's raining, how far should you evacuate people? They're just not going to have that capability.

The fact of the matter is, Mr. Chairman, the Chemtrek system works. Now, I'm not here to defend Chemtrek. I think that the Chemical Manufacturer's Association and Chemtrek people will probably testify before this committee.

I am suggesting to you that H.R. 3334 is not an improvement. Certainly it is not a $2 billion improvement.

One additional point—we've heard a lot about people being threatened and imperiled in incidents of hazardous materials, and to be sure, the danger is there.

The fact of the matter is, however, your Honor—I'm sorry, I slipped back into my court days—the fact of the matter is, Mr. Chairman, that when an incident occurs, and there is serious loss of life involved, that serious loss of life almost invariably happens within moments of the incident.

The fact that somebody can run in and tell later how to correct the situation probably will not have a significant impact on loss of life or injury.

Evacuation prevents that.

Mr. Chairman, Mr. Gallo's bill which I heard described this morning by Mr. Gallo does seem to be an appropriate legislative approach. Let's define the problem, let's put some parameters around it.

I think that we heard Ms. Page talk about a $5 million to $7 million number in terms of additional training. That seems to make sense. It makes a great deal more sense than $2 billion.

The driver licensing makes sense, and Title Three of SARA, as Ms. Page said, is indeed a significant step forward.

Federal preemption is indicated, and I'd be happy to answer any questions. Thank you, Mr. Chairman.

Mr. ANDERSON. Thank you, Mr. Donovan. Mr. Sweeney?

TESTIMONY OF DANIEL SWEENEY, GENERAL COUNSEL, DRUG AND TOILET PREPARATION TRAFFIC CONFERENCE, NATIONAL SMALL SHIPMENT TRAFFIC CONFERENCE

Mr. SWEENEY. My name is Dan Sweeney. I'm testifying as General Counsel for the Drug and Toilet Preparation Traffic Conference and also for the National Small Shipments Traffic Conference.

Both of these are associations of shippers, many of whom make shipments of commodities considered to be hazardous materials.

Our members ship primarily in LTL quantities and are particularly interested in legislation and regulation affecting small quantities.

Before discussing the specific bills, I want to offer three points for consideration. First, it is important that the Secretary of Transportation shall have the power to issue regulations on intrastate and interstate transportation so that they shall be uniform, in the sense that State regulations are preempted.

Otherwise, it results in chaos, if you have a series of different regulations as a vehicle moves from one jurisdiction to another.

Second point is that if any of these bills are to progress, there should be a statutory exception power granted to be exercised by the Department of Transportation for small quantities of these materials shipped in consumer packages—the so-called consumer commodities ORMD.

Incidentally, H.R. 4069 does have that kind of a provision in it.

It appears inevitable that the funding for equipping and training emergency response personnel will be in some form of user tax.

The tax should only be upon materials at a significant level of hazard, such as explosives or materials which are extremely toxic by inhalation, and large bulk shipments which have the potential for major incidents.

It is questionable that small quantities of the consumer commodities which I mentioned, which present very minor hazards, should be taxed. And if they were taxed, that should only be at a much lower level.

Turning now to a couple of the bills that we have on the table, H.R. 4069, which was introduced by the late Chairman Howard, as well as by Chairman Anderson, Mr. Hammerschmidt and Mr. Shuster, appears to be the best of the bills on the table.

It provides that the Secretary of DOT shall issue regulations as to interstate and intrastate transportation, and it preempts the States from imposing local requirements.

It also directs the Secretary to issue standards for the designation of routes which will be controlling on the States. This is crucial in order to maintain a free flow of commerce over the road.

Turning now to H.R. 3334, about which there has been so much said today—I'm somewhat surprised, like Mr. Donovan, to hear so much made of a bill that I didn't think would really call for that much attention. That bill appears to be misdirected. It would be impractical and even impossible to attempt to track every hazmat shipment down to and including relatively innocuous shipments such as aerosol cans.

Consider for example the number of times that an LTL or UPS shipment would have to be reported as it moves through the carrier system of terminals toward delivery. The computer system, even with the required capacity of 500,000 shipments, would be quickly overloaded.

The $12.00 fee per manifest is extremely burdensome. Actually, this proposal appears to duplicate information which is already available from the carrier. The carrier maintains a manifest, and not only that, the carrier tracks each shipment through its system. The carriers have that information on computers.

So, what you're really talking about is the method of accessing the carriers. Now, if that's what you need, it would seem that by having an 800 number on every truck and tractor trailer combination out there, there would be a number to call right away to find out what's in the trailer or that truck, and this could be done anyplace—wherever the vehicle was on the highway, if there's smoke or flame or a spill—just go to your nearest telephone. You don't have to run to a computer. Just call the carrier and ask what's on the truck. This is a direct way of getting information rather than creating this whole monstrous, $2 billion system.

As a practical matter, you probably couldn't access that system on the highway anyway.

Turning to H.R. 4153, which is the Gallo bill, that would have DOT conduct analyses of hazardous materials incidents and hazardous materials flow on the highway, water and railroads. This appears to be a desirable and objective study, because it would give Congress the requisite information to identify the scope of the problem.

Finally, H.R. 895 covers registration of hazmat carriers, routing of hazmat shipments, and also equipping and training emergency response personnel.

This would, however, require local shipping clearance for each shipment of hazardous materials through a city or town with 50,000 population. This is wholly impractical and unworkable.

Such goals can best be achieved through the Federal Department of Transportation's control over routing. Extreme care must be taken in legislation not to make requirements too stringent for the hazmat carriers. Otherwise we will end up with motor carriers reacting by embargoing or boycotting small quantity shipments, which in reality present no real threat.

Thank you very much, Mr. Chairman.

Mr. ANDERSON. Thank you, Mr. Sweeney.

I do have a couple of questions here.

First, Mr. Donovan, do you support any Federal responsibility for training emergency responders in the public sector, such as firemen and police?

Mr. DONOVAN. Absolutely.

There are programs that do that right now.

Mr. ANDERSON. There are programs that do that?

Mr. DONOVAN. Yes.

Mr. ANDERSON. Who do you believe, Mr. Donovan, should bear the responsibility for training costs incurred for training firemen and police who response to accidents involving hazardous materials?

Mr. DONOVAN. I think the cost has to be shared in some form.

You have the cost of the training program itself, and you have the cost of the employee, who is obviously not on his job but doing something else at that time. There's the cost of dormitories, and so on and so forth.

The information provided us by the International Association of Fire Chiefs indicates that the cost of these training programs is minimal. Whether it's borne by the Federal Government or the State and local municipal interests is really not a huge item. We're not talking about $80 million here.

Mr. ANDERSON. Mr. Donovan, you opposed the concept of notification and pre-notification.

How would you suggest that States and localities plan for potential accidents, if they have no knowledge of what types of hazardous materials shipments are moving through their localities?

Mr. DONOVAN. Let me answer that question in two ways, Mr. Chairman, respectfully.

I think that's built upon a false premise, and that is that they don't have that knowledge.

They may not have enough knowledge right now, but they do have some—there's no question about that.

They do need additional knowledge, and I suspect that Mr. Gallo's bill would go a long way towards correcting that, and I would support that.

In fact, we have at the SAFEST coalition supported what we call a flow study to show the largely highly traveled routes, what's moving on those routes—to correspond the training programs with those flow routes.

Now, with respect to the prenotification concept, I suggest, Mr. Chairman, that what the fire chief or whomever would have on his desk is a huge, huge, ever-changing volume of information which would be so voluminous as to be essentially worthless.

Mr. **Anderson**. Mr. Sweeney, you seem to be reconciled to some sort of funding mechanism for equipping and training emergency response personnel.

My question is, do you have any recommendations on how that funding should be provided? For example, do you think that shippers and carriers should be assessed a fee, and do you believe that the Federal Government should be the assessor and collector of the fee?

Mr. **Sweeney**. Well, I have a very short answer.

I have no recommendation to make on that.

Mr. **Anderson**. That's good.

Mr. **Sweeney**. Unfortunately.

I anticipated the question, but I still don't have an answer.

Mr. **Anderson**. Okay.

My second question is, do you favor a registration program at the Federal level for shippers and carriers of hazardous material?

Mr. **Sweeney**. Well, at this point, we're supporting the registration program for the carriers. We're not specifically supporting one for the shippers.

I think that's sort of typifying the attitude in this whole area. Everybody always says, well, let the next guy do it. We're saying, let the carriers take care of the reporting end of it.

Mr. **Anderson**. That completes my questions, and I have to go vote again.

So that would complete this panel.

We'll recess at this moment, and come back in about 15 minutes. At that time, our final panel will come up, Mr. Noah Samarra, and Frank G. Fotta.

Thank you, Mr. Sweeney and Mr. Donovan, for your presentation.

Mr. **Donovan**. Thank you.

Mr. **Sweeney**. Thank you.

[The prepared testimonies of Mr. Donovan and Mr. Sweeney follow:]

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

OF THE COMMITTEE ON PUBLIC WORKS

AND TRANSPORTATION OF THE

U.S. HOUSE OF REPRESENTATIVES

HEARINGS ON AMENDMENTS TO
THE HAZARDOUS MATERIALS
TRANSPORTATION ACT

MAY 19, 1988

TESTIMONY OF PAUL M. DONOVAN

ON BEHALF OF S.A.F.E.S.T.

Paul M. Donovan

LaRoe, Winn, Moerman & Donovan
1120 G Street, N.W.
Suite 800
Washington, D.C. 20005
(202) 628-2788

Attorney For S.A.F.E.S.T.

INTRODUCTION

Mr. Chairman and Members of the Subcommittee, I first wish to express my appreciation for this opportunity to address the Subcommittee on behalf of the Shippers Alliance For Efficient, Safe Transportation, commonly known as S.A.F.E.S.T. S.A.F.E.S.T. is a coalition of industrial chemical shippers, carrier organizations and others with an interest in issues concerning the transportation of hazardous materials. Members of S.A.F.E.S.T. include: American Waterways Operators; Association of American Railroads; the Chlorine Institute; B.F.Goodrich; C-I-L Corporation of America; Dow Chemical U.S.A.; Hanlin Group; Leaseway Transportation; and Occidental Chemical Corporation.

As the organization's name suggests, S.A.F.E.S.T. is committed to the safe and efficient transportation of hazardous materials. Because of the S.A.F.E.S.T. members' intimate role in hazmat transportation, it is definitely not in our interest to tolerate unsafe or perilous transportation conditions. At the same time, it equally is not in S.A.F.E.S.T.'s interest, nor in the best interest of this country, to impose a variety of multiple, unnecessary or conflicting hazmat regulations. This nation's economic and social future is directly tied to an efficient, workable hazmat transportation system. Safety, of course, is the first priority. But regulations at the federal, state and local level must be consistent and reasonably related to actual safety needs.

S.A.F.E.S.T. POSITION ON REAUTHORIZATION OF H.M.T.A.

A. Training

Over the past few years there have been repeated calls for increased federal funding of training programs for local emergency response personnel. However, it seems unnecessary to raise large sums of money for additional hazmat first responder training programs, considering the wide range of federal, state, local and privately sponsored programs currently available. Collectively, these programs represent an existing readiness capability with sufficient capacity to train a quality force of first responders. In its 1986 report to the Congress, the Federal Emergency Management Agency identified 412 emergency response training courses offered by the private sector, educational institutions, local governments, state governments and the Federal government. The courses train some 102,000 students per year, providing each student with an average of 14 hours of training.

Unfortunately, many localities do not assign emergency personnel to the hazmat training sessions because of the relative infrequency of hazmat incidents. The end result is that many existing hazmat training courses are under-utilized. For example, in 1984 there were approximately 1 million structural fires in the United States. By contrast, there were only 6,000 hazmat incidents. Given this disparity, it is not difficult to understand fire chiefs placing relatively less emphasis on hazmat training than upon other forms of training for incidents that are more likely to occur.

B. Equipment

There is an obvious temptation on the part of local governments to acquire specialized equipment against the eventuality of a hazmat incident. However, the reality is that many localities never come into contact with a hazmat shipment that would require the response of specialized equipment. Allocating federal dollars to provide equipment where hazmat shipments rarely move is a wasteful expenditure. Moreover it must be remembered that three-fourths of all hazmat incidents involve petroleum products, principally gasoline. These petroleum incidents are routinely handled with currently available firefighting equipment. These are the only hazmat shipments that move through most localities.

C. Highway Routing and Federal Primacy

S.A.F.E.S.T. believes that in the area of hazmat transportation, the role of the Federal government as the primary regulator and final arbitrator must be safeguarded. S.A.F.E.S.T. does not minimize the role of state and local governments. Indeed, given the monetary and manpower constraints on the Federal government in this day and age, an active regulatory and enforcement role by local entities is the only means by which a safe hazmat transportation system can be guaranteed.

At the same time, given the national scope of hazmat transportation and its importance to the general economy, the Federal role must be predominant with respect to the promulgation of enforceable regulations, standards, and guidelines. Specifically, the U.S. Department of Transportation, acting with the input and cooperation of state and local governments, must be the final decision-maker on highway routing issues. Uncoordinated state and local intiatives in this area can only result in confusing, conflicting and costly regulatory requirements. The parochial approach undertaken in the Boston area serves to illustrate what occurs when no federal standard exists. Initially, hazmat shipments were restricted from moving through the City of Boston. Several municipalities then became alarmed by the re-routing of those shipments and subsequently passed ordinances banning those movements through their jurisdictions. It became virtually impossible to move these necessary industrial commodities along the New England corridor.

The results of conflicting state and local regulations are economic dislocations and heightened transporation risks. First, it is conceivable that whole regions could enact local ordinances banning the transportation of hazardous materials through their borders. Such a result is not a solution. Hazardous materials must be transported efficiently if a healthy economy is to be maintained. Second, local control of highway hazmat routing may even increase the risk of accidents and injuries. Additional distances and transit times and the added frequency of highway entry and exit combine to increase the likelihood of dangerous accidents.

Along these lines, S.A.F.E.S.T. emphatically opposes the concept of notification and prenotification requirements for the carriage of hazmats over the nation's highways. Such requirements would place a stranglehold on the hazmat transportation system, with no corresponding safety benefits. Nor would public safety be enchanced.

To the contrary, efficient emergency response and safety regulation would be impeded, as local governments would be flooded with highway routing information that, in the case of most localities, would be beyond their ability to collate and process.

D. Driver Safety

It is imperative that commercial operators of motor vehicles transporting hazmats be held to a higher standard of proficiency and safety than are non-hazmat commercial vehicle operators. The U.S. Department of Transportation should be charged with developing minimum standards of competency for commercial hazmat drivers. States must bear the responsibility for driver licensing and for sanctioning unsafe commercial hazmat operators. Strict enforcement of highway safety laws will reduce the number of hazmat incidents.

CONCLUSION

S.A.F.E.S.T. members are committed to the safe transporation of hazmats. As shippers and transporters of hazmats, it is very much in our interest as well as the public interest to have the system operate safely. A serious hazmat incident has several inevitable consequences: the public is placed at risk; the shipper and transporter face a loss of reputation and public confidence; revenues are forfeited; and clean-up costs are incurred. In addition, the shipper and transporter can anticipate substantial legal costs and even damage awards from third party lawsuits.

At the same time, the focus must be on safe and efficient regulation. It is neither safe nor efficient for various state and local governments to adopt and enforce conflicting and confusing ordinances and regulations. Hazmat transportation is a national issue and it must be regulated at the Federal level.

BEFORE THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON SURFACE TRANSPORTATION

HEARING ON BILLS TO AMEND THE HAZARDOUS MATERIALS TRANSPORTATION ACT

TESTIMONY FOR DRUG AND TOILET PREPARATION TRAFFIC CONFERENCE AND NATIONAL SMALL SHIPMENTS TRAFFIC CONFERENCE

May 19, 1988

My name is Daniel J. Sweeney and I am testifying as General Counsel for the Drug and Toilet Preparation Traffic Conference and the National Small Shipments Traffic Conference. Both organizations are associations of shippers, many of which make shipments of commodities considered to be hazardous materials. The members ship primarily in LTL quantities and are particularly interested in legislation and regulation affecting small quantities.

Before discussing the bills specifically, a few general comments may be helpful.

It is important that the Secretary of Transportation shall have the power to issue the regulations governing intrastate as well as interstate transportation and that they should be uniform, in the sense that state regulations are preempted. Otherwise, it would lead to chaos if there were a series of different regulations to govern the same shipment.

It is equally important that, if any of these Bills are progressed, there should be a statutory exception power granted, to be exercised by DOT, for small quantities of these materials shipped in consumer packages, i.e., Consumer Commodities ORM-D.

It appears inevitable that the funding for equi [illegible] ng and training emergency response personnel will be in some type of user tax. But the tax should only be upon materials at a significant level of hazard, such as explosives, materials toxic by inhalation, and large bulk shipments which have the potential for major incidents. It is questionable that smaller quantities or Consumer Commodities ORM-D, which present minor hazard, should be taxed. If they are taxed, they should only be taxed at a much lower level.

We will now address specific comments to the bills being considered here.

H.R. 4069, introduced by the late Chairman Howard, as well as by Messrs. Anderson, Hammershmidt and Shuster, appears to be by far the best of the bills on the table. The Bill goes directly to the largest problem facing shippers and carriers today. It provides that the Secretary of Transportation shall issue regulations as to intrastate as well as interstate transportation and it preempts the states from imposing local requirements as to designation of hazardous materials, packing, documentation, routing and package design. It directs the Secretary to issue standards for designation of routes which will be controlling in the states. This is crucial because, otherwise, the free flow of commerce will be impeded by the states.

In transporting shipments throughout the United States, Motor Carriers are faced with a growing proliferation of differing and confusing local rules and regulations governing the transportation of hazardous materials. Not only do such parochial rules unduly burden interstate commerce, but they are apt to impact adversely on public safety. It is obviously much more difficult for a carrier to be knowledgeable of and in compliance with the present confusing array of conflicting rules and standards than with a single set of national rules and standards. In preempting local rules regarding hazardous materials transportation with national standards and rules, H.R. 4069 would not only promote commerce but it would enhance public safety as well. However, we do not agree that the word "knowingly" should be removed from the penalty provisions, as proposed in Section 7 of this Bill. Persons should not be held liable for penalties without their knowledge.

H.R. 3334 is totally unacceptable. It would be impractical and even impossible to attempt to track every hazmat shipment, down to and including relatively innocuous shipments, such as an aerosol can. A computer system with the required capacity to track 500,000 daily shipments would be quickly overloaded. And the $12.00 fee per manifest is outrageous. Consider, for example, the number of times that an LTL or UPS shipment would have to be reported as it moves through the carrier's system of terminals toward delivery.

H.R. 4153 would have DOT conduct analyses of hazardous materials incidents and hazardous materials flow via highway, water and railroad. This appears to be a desirable and objective study, as it would give Congress the requisite information to identify the scope of the problem it is working on.

H.R. 895. This bill covers registration of hazmat carriers, routing of hazmat shipments, and equipping and training of emergency response personnel. It would require local "shipping clearance" for each shipment of hazardous materials via each city or town of 50,000 popluation. This is wholly impractical. Such goals can best be achieved through the Federal Department of Transportation. Extreme care must be taken not to make requirements too stringent for hazmat carriers, otherwise carriers will react by embargoing or boycotting small quantity shipments which in reality present very little threat. As far as pre-clearance for shipments is concerned, authorizations for routing or notification prescriptions should not be required from cities, towns, *etc.*, as such authorizations may not be given. In any event, any prospective routing or notification requirements should be limited to extremely hazardous shipments, such as explosives and materials extremely toxic by inhalation. The basis proposed for assessing a tax on hazmat materials in transportation would tax each product on the same unit basis, 2.5 cents per ton, regardless of the potential of each product. That would be unreasonable. Furthermore, care must be taken to preclude products such as toiletries or cosmetics in aerosols from being taxed on the same basis as explosives.

H.R. 3682. While this bill recognizes as desirable the States into the designation of routes for hazmat materials would lead to inconsistencies, conflicts and frustration of shipments. In this respect, the routing provisions of H.R. 4069 are far preferable.

H.R. 2650. This bill would also assign the states the unworkable authority to designate hazmat routes. This can only be done federally. The bill also recognizes regulation of intrastate hazmat shipments, registration of carriers and shippers, improved routing and hazmat flow studies as desirable. There should be exceptions to full regulation. For example, a company which ships only ORM-D Consumer Commodities should not be required to register. In any event, states should not be given control over the routing process. The proposal of a mandatory minimum $500 fine is not equitable. The amount of the penalty in specific cases should be left to the discretion and judgment of the Department of Transportation.

H.R. 3077, H.R. 3598, H.R. 3836, H.R. 1646 and H.R. 1649. These bills apply to radioactive materials. As to these bills, we have no comments, as we will leave that to companies more directly affected by them.

Mr. **Anderson**. We'll stand in recess for 15 minutes.

[Recess.]

Mr. **Anderson**. The meeting of the subcommittee will come to order.

Here is our final panel.

Mr. Noah Samarra, director of Government and International Affairs, Geostar Corporation.

Frank G. Fotta, President of Railstar Control Technology, Inc.

We do have each of your prepared statements and they will be made a matter of record in their entirety.

TESTIMONY OF FRANK G. FOTTA, PRESIDENT, RAILSTAR CONTROL TECHNOLOGY, INC.

Mr. **Fotta**. Mr. Chairman, my name is Mr. Frank Fotta, and Mr. Samarra and I have discussed the matter and agreed that I should go first.

Mr. **Anderson**. Okay, Mr. Fotta will go first.

Mr. **Fotta**. Thank you, sir.

First of all, let me thank the committee for hearing me today.

The prime purpose for my being here is not to seek legislation or regulation but to bring the committee up to date on technology that we're working with today.

My background has been, for the last 30 years or so, in the railroad and transportation environments. I've been responsible not only for some of the technical aspects of railroading, but also for the operational aspects, most recently being Vice President of Operations for a major U.S. railroad.

My religion, if you will, or exposure to hazardous material waste came in the form of learning prayers on dark nights along the railroad tracks. I must tell you, Mr. Chairman, that on every one of those occasions, somehow, rain and cold drizzle were part of the venue.

What we have done at Railstar early on, was to create a system from the most modern technologies available now. That system was designed to facilitate transportation management, and it is essentially an amalgamation of some of the newest and most recently developed technologies that exist. Three such technologies are used.

The first technology stems from the electronic bank teller. It provides a means of telling a stationery or quiescent device on the HAZMAT vehicle what it should know—very much like a bank card communicates with an electronic teller machine.

Secondly, there is new satellite technology which can be utilized to look at, track and obtain data from moving vehicles. This is different from the commonly existing satellite technology which provides station to station communications. Now, through a very small antenna, about four inches square, we can get information directly from vehicles as they move about the country.

That information is available, by the way, across the entire 48 States of the continental United States.

Thirdly, and not least, is the advancement in micro-chip intelligence, by virtue of the fact, very small packages we can tell devices and machines what to look for.

I'd like very quickly to describe the system, and then relate to you some of the goals that we're realizing.

The system is designed so that with a credit card or electronic key type of device, you can introduce into the vessel—I'm not speaking primarily of a marine vessel, but either a marine vessel, a rail vessel or a rubber tire vessel, being a trailer—hazardous commodity vessels. You can introduce into that device information such as its origin, its destination, and what community it has within.

Now, the intelligence that you put aboard that vessel has a comprehension of what its mission is.

In the environment that we've created, that vessel immediately communicates with our monitoring center, via satellite, so that the center, in Merrimack, New Hampshire, has an acquaintanceship with those three factors. We also begin monitoring on-board the vehicle its location and what is happening within that vessel—pressure and temperature being the most critical criteria.

As that vessel proceeds towards its destination, the control center at Merrimack plots it progress through the location system that is aboard the vehicle. We therefore have two facilities from which we are monitoring what's happening within the vessel and plotting its progress across the country.

Also within our capability now is the ability to look at that particular vehicle, determine its pre-arranged route, determine automatically whether or not the vehicle is continuing upon its pre-arranged route, and in addition determine whether or not it is adhering to a schedule which could have been determined for it.

Now, we're looking at a vehicle which had a route pre-arranged to avoid areas of conflict for a hazardous material, and assuring automatically that the vessel is following that route.

What do we do with all this information? Presently, several major chemical companies have asked us to create demonstration systems for them. Mr. Chairman, that we presently have at least one demonstration in every one of the transportation environments in various stages of development.

We have a marine demonstration, a rail demonstration and truck demonstration underway.

We've been well received by the chemical industry, and in fact they are quite enthusiastic about the system for one major reason, and I'd like to make this point, if I make no other.

The best statistics that we've been able to obtain reflect that only five percent of the chemical spills during calendar year 1987 resulted from accidents. Some 95 percent of chemical releases or spills were not related to accidents. The chemical industry is interested in "How is my chemical doing, what is happening within the vessel, and how can I take the actions that are necessary to prevent that 95 percent of how accidents related incidents that are occurring today?

By measuring the health of the commodity within, and reporting its condition at various thresholds of developing problems, there can be as much as 12, 24, 48, or many more hours that can be utilized in order to head off these non-accident-related incidents that are happening today.

Now, to take that one step further—if there does happen to be an accident, and the equipment is not completely destroyed, it merely continues reporting that either the commodity within is OK, OK, OK, or else, "I have a problem within." This information certainly would be critical not only the people who were handling the system, but to the local emergency response teams.

In some cases, we would look forward to having enough information so that evacuations, as they had been carried on in the past, may not be necessary. I can tell you from personal experience that there is considerable apprehension at the site of one of these incidents since you really don't know what's happening inside the vessel.

Now, the information, as it is gathered, is not kept by us. In the initial systems, it's going to be fed back to the manufacturers—i.e., sponsors of the system and the owners of the chemical. These are the folks who know most about the commodity and are most capable of handling any incident.

Essentially, our goal is to put a tool in the hands of the people who know most about what the chemical should be doing. This gives them the opportunity to exert their efforts in preventative action.

Should an accident occur, being capable of handling that accident in a more efficient and proficient manner by being able to look inside the vehicle would be a plus.

Mr. Chairman, essentially that's what the system does.

We're looking forward to the demonstrations. We have had a very warm reception by many of the major chemical companies. My hope is that I can keep the committee updated on the progress of development and invite the committee to our headquarters to see the system in action.

The system is up and operating in its early stages now.

Thank you, Mr. Chairman.

Mr. ANDERSON. Thank you, Mr. Fotta.

And, Mr. Samarra, I was just told that Mr. Fotta has to catch a 4:30 plane, so I'll ask my questions of him and hopefully let him get out of here in time to get his plane.

Mr. Fotta. Is the Railstar system able to function after an accident?

Mr. FOTTA. Yes, Mr. Chairman, it is, unless the equipment was completely destroyed. The conclusion that you could draw from that is that the equipment is destroyed, the vessel probably has been breached, and there is no question about what action needs to be taken.

However, even in this case, invaluable information has been created—i.e., the central computer database—knows where the accident happened by sensing the immediate release of the pressure in the vessel. Knowing that an accident has occurred, where it has happened, and precisely what the commodity is. In the hands of the right people would certainly provide emergency response teams considerable advantage in being able to handle the situation.

There is enormous value in the system which would have comprehended all those factors ahead of time.

Mr. ANDERSON. Would you explain whether the system could advise emergency response and fire personnel when it is safe to move a tank truck or rail car that has been involved in an accident?

Mr. Fotta. That certainly is a prime capability of the system, and one that we look forward to utilizing. This is accomplished by Central Control listening to the vehicle reporting in specific terms whether it is "all right" or has reached one of the thresholds of liability. These concrete facts would establish how that vessel should best be handled to dispose of it.

Mr. Anderson. Now, you state in your testimony that regulating or mandating the use of your system would be a hinderance rather than an advance in the adoption of such monitoring devices.

Mr. Fotta. That position is taken by virtue of the fact that the challenge that we are encountering now is such a large and complex subject. These materials range from the most hazardous chemicals down to some that are quite harmless—any regulation that would have such a broad scope would be difficult to make comprehensive and enforcable.

By virtue of that fact, if the development moves along, and industry accepts it, then it would seem to me that industry, in its own pursuit of preventative action would respond to the majority of the problems that now exist. Again, I'm relating to the 95 percent non-accident-related incidents.

Mr. Anderson. How rapidly do you think industry will adopt the use of such a system without regulation?

Mr. Fotta. Our present indications are that a system like ours, or our system, probably would be adopted very quickly, by virtue of the fact that it does address probably one of the most difficult issues that the chemical industry is facing today.

Mr. Anderson. How much of the industry is currently using your system, and what has been their response to this technology?

Mr. Fotta. The system has only been operative since March 11, when the satellite that specifically complements our service has been made available.

Since that time, we have the demonstration projects underway, as we have said. We've talked to several of the industry coalitions, and there is strong support to pursue the development as rapidly as we possibly can.

I can't give you a time or date, Mr. Chairman, because as we develop undefined areas, there are always new factors discovered that will complement the effort and improve the product.

Mr. Anderson. What would be the cost for the Railstar system, both for the tracking units and the monitoring base?

Mr. Fotta. Depending on the sophistication of the monitoring units, there would be a capital cost of about $5,000 to $8,000 per vehicle, and then an ongoing monthly charge of about $50 per vessel to monitor each vehicle as we are doing it presently.

Largely, sir, that cost stems from the cost of the satellite communications.

Mr. Anderson. Mr. Mineta?

Mr. Mineta. Mr. Chairman, I have no questions.

Mr. Anderson. Okay, well, then, Mr. Fotta, I guess that completes your testimony. You can stay here as long as you want, but if you have to go get that airplane, you're free.

[Mr. Fotta's prepared statement follows:]

TRANSPORTATION OF HAZARDOUS MATERIALS

STATEMENT OF
FRANK G. FOTTA
PRESIDENT
RAILSTAR CONTROL TECHNOLOGY, INC.

BEFORE THE
HOUSE PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON
SURFACE TRANSPORTATION
MAY 19, 1988

Mr. Chairman, and members of the Subcommittee, thank you for this opportunity to testify on new technology now available to not only track the location, but also to monitor the health of hazardous materials as they are being transported by any transportation mode, be that truck, barge, railcar or aircraft. My name is Frank G. Fotta, President of Railstar Control Technology, Inc. located in Merrimack, New Hampshire.

The transportation of special commodities in the United States has grown into a complex industry that involves many independent shippers moving a multitude of commodities in various types of vehicles over a complex national transportation system between thousands of shipping terminals located throughout the country. Until now, the monitoring of status or location of these shipments has been sketchy at best. Information on location of barges, trailers or railcars enroute, for instance, can frequently be very vague and late - often times with delays of days in reporting the interim location or final destination arrival. While in transit, little or no commodity status monitoring can be performed.

Today, a system for continual monitoring and tracking of entire fleets of high value, hazardous, nuclear, or other commodity conveyances as they move about the country is available. This system provides for the first time, the tools to detect developing problems in vehicle routing or commodity status. Such information is made available at the earliest possible moment so that preventive actions may be taken BEFORE critical situations arise, as well as providing instant warning when (if) they do begin to materialize. We call our system SCANTRAK - Special Commodity Analysis and Tracking.

With a low cost, low power, satellite communicator (User Unit) placed on the vehicle, not only the location, but also temperature, stability and other conditions of the conveyance and its contents can be reported via Satellite and our data processing center to a User's monitoring center. Since linkage is via Satellite, data can be collected from virtually any location in the Continental United States regardless of property ownership or other boundaries.

With such information the condition of commodities under load can be monitored with corrective actions that can be in some cases as simple as rerouting the vehicle. If, on the other hand, relief does become necessary, it can be handled in an orderly, planned manner.

OPERATIONAL OVERVIEW

In Summary, the SCANTRAK System monitors the location and status of large fleets, focuses attention on any aberrations from pre-planned criteria and provides adequate information to prevent unnecessary detention or other critical situations from arising.

The SCANTRAK System is comprised of five major segments; the Data Entry Unit, the Vehicle (User) Unit, the Satellite Relay, Railstar Central and the User Monitoring Center.

When a commodity is loaded into a vehicle and the vehicle is secured, the shipper may use a portable data entry unit to load data pertinent to the shipment directly into the SCANTRAK Unit mounted to the vehicle. To enter data requires a proper identity of the shipper and authorized personnel. Data entered by the shipper includes identification of commodity and consignee. To reduce the possibility of vandalism, the Vehicle Unit itself has no visible displays or data entry mechanisms.

The Vehicle Unit continually monitors various sensors, such as temperature, and pressure, relative to predetermined control limits. If a control limit is exceeded on any parameter - or at pre-programmed time intervals - the Unit initiates data communications which are picked up by the Satellite Repeater. At the satellite, the message is re-transmitted to the Railstar Central ground station. Here the message format is detected and decoded into usable messages. After further processing and data enhancement, appropriate information is sent, automatically via traditional communications linkage, to a User's Monitoring Center.

As the information passes through Railstar Central, it is integrated with previously catalogued SCANTRAK data to produce the User's required reports and displays. If any parameter is tending toward a critical value, appropriate warnings or alarms will be enabled at the User Monitor Center together with graphic identification of vehicle location and display of predetermined incipient or emergency warning.

VEHICLE UNIT

The Vehicle Unit can be applied to truck trailers and tractors, locomotives, railcars or barges. It is comprised of a sophisticated ultra high-frequency transmitter utilizing unique state of the art design and technology. By applying wide band techniques, the unit has the capacity to communicate at any time with a satellite using only a small, unobtrusive omni-directional antenna.

Each Vehicle Unit has a unique address code which identifies it and its conveying vehicle as part of each transmission. Location and identifier are coupled into the message together with car and commodity information, which was entered into the Vehicle Unit at the time of commodity loading. The transmitted information may include a high number of digital and analog data entries.

Such a capability provides capacity to report, automatically, the many dynamic conditions as they may be occurring. These could include:

- Ambient Temperature
- Commodity Temperature
- Internal Vessel Pressure
- Loaded/Empty
- Hatch/Valve Security
- Concussion
- Humidity
- Hot Axle or Bearing Detection

The Unit can be arranged to send a message each time it is triggered externally, detects a change of value of a monitored parameter or on a regular interval clocked basis. As need exists, these keying triggers may also be commingled. In addition to continuously monitoring vehicle and commodity parameters, the Vehicle Unit performs self-diagnostic checks on its sense lines, power, logic, and transmitter elements. An advisory message will be sent in the event that a unit fails to satisfy its self-check test.

SATELLITE RELAY

The message repeater (satellite relay) resides on a GTE Spacenet III/Geostar R01 Satellite, successfully launched on March 11, 1988 by Arianespace. A second repeater is scheduled for launch on a GTE G-Star III/Geostar R02 sometime during the second half of 1988. Both have the capacity to receive signals directly from the Vehicle Units, amplify and retransmit them to the ground station. Each Satellite Repeater is designed with full internal redundancy for high operational reliability and long life.

RAILSTAR CENTRAL

Railstar Central receives the downlink signals from the Satellite message repeater through large antennae and specially designed, high sensitivity radio. The signals will be demodulated and processed in a very powerful, multi-stage computer complex located in Merrimack, New Hampshire.

USER MONITORING CENTER

The User Monitoring Center (UMC) performs as a command and control center. It receives data from Railstar Central and merges the messages information updates received with a historical data base resident within it. In addition, color intensity plus a flashing icon on a control screen with audible annunciation focus immediate attention to any vehicle which may be tending toward unfavorable conditions.

Information to be provided for an alarm condition includes- in addition to vehicle location and commodity data - the names and telephone numbers of appropriate local Emergency Response Teams based on the current geographic location of the vehicle, CHEMTREC, appropriate local, state, and Federal personnel, shipper, consignee and carrier involved.

CONCLUSION

Mr. Chairman, thank you for listening to our presentation. We are clearly very proud of our system. The first satellite launch on March 11 of this year was a complete success. The French Arianespace launch system was used for this launch. The satellite, Spacenet IIIR, was designed and built by GE Astro and owned by GTE, so it is a totally American product. System testing of the space link showed excellent coverage of the Continental United States (48 states), substantially better than expectations. The system is currently being installed on several railroads, trucking companies, and other transportation operations throughout North America.

I do however wish to make a very important point about our system and our reason for appearing here today. Simply stated shippers and carriers of high value commodities, be they hazardous materials, nuclear materials, or military inventory, will within a very short period of time, see that there are very specific and quantifiable advantages to using a system like Railstar's. This System will not be just an aid to early response to potential catastrophic problems, but the fleet management and distribution management attributes of the system and the reduction in risk experience will be the economic factors that drive the utilization of the system. In short, regulating or mandating the use of this system will hinder not advance the adoption of hazardous materials tracking.

The cumbersome regulations which would need to be developed in response to legislation might serve only to confuse and delay the adoption of a monitoring system. As much as regulation might create an instant market for our product, we do not see such regulation in the best interest of the manufacturing community, who use these hazardous materials, shippers or transporters.

My background is in the railroad industry and I have seen first hand how regulations have hamstrung both shippers and railroads. Given the abilities of our system and that experience, I think the marketplace will drive the acceptance of our product and those like it.

Again, we appreciate the opportunity to testify today and I would be glad to answer any questions from the Subcommittee.

INTRODUCTION
to
SCANTRAK™

A System Development
Provided By

Railstar *Control Technology, Incorporated*

Merrimack New Hampshire, U.S.A.
Phone (603) 429-1612

SCANTRAK

PROVIDES

CONTINUOUS MONITORING OF

- Commodity Parameters
- Vehicle Well Being

REAL TIME REPORTING

- Vehicle Location
- Commodity Status

ANALYSIS OF DATA TO PROVIDE

- Focus On Unusual Situations
- Incipient Warning of Developing Emergencies
- Emergency Alarms

SAFETY CONTROL CENTER

- Portray All Appropriate Data
- Contain Supporting Information For Preventive Action As Well As Emergency Response

Railstar
Control Technology Inc.

7 Executive Park Drive
Merrimack, N.H. 03054 U.S.A.
Tel 603 429 1612
Fax 603 429 1755

PROPRIETARY RIGHTS

These technical data and the designs disclosed herein, submitted as part of a proposal, shall not be disclosed outside the government or organization, as the case may be, to whom the proposal is submitted by Railstar Control Technology, Inc., or be duplicated, used or disclosed in whole or in part for any purpose, other than to evaluate the Proposal of which they are a part, provided that if a contract is awarded to Railstar Control Technology, Inc., as a result of or in connection with the submission of such data, the customer shall have the right to duplicate, use or disclose these data to the extent provided in the Contract. This restriction does not limit such government or organization's right to use information contained in such data if it is obtained from another source.

Railstar Control Technology Incorporated

SCANTRAK™

TABLE

OF

CONTENTS

SECTION PAGE

1 OVERVIEW 1

2 SYSTEM DESCRIPTION 5

Data Entry Unit 8

Vehicle Unit 10

Satellite Relay 13

Railstar Central 13

User Monitoring Center 15

Railstar
Control Technology In

BEST AVAILABLE COPY

BEST AVAILABLE COPY

ILLINOIS
RAIL ROUTE

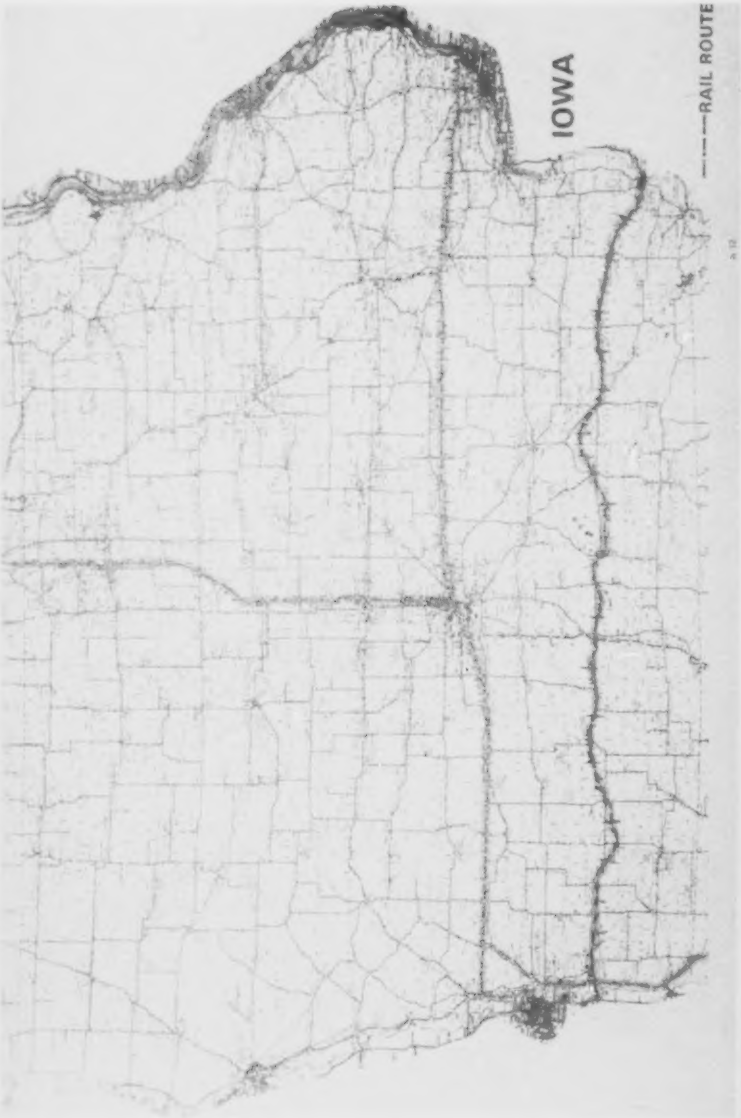
BEST AVAILABLE COPY

SOUTHERN ILLINOIS

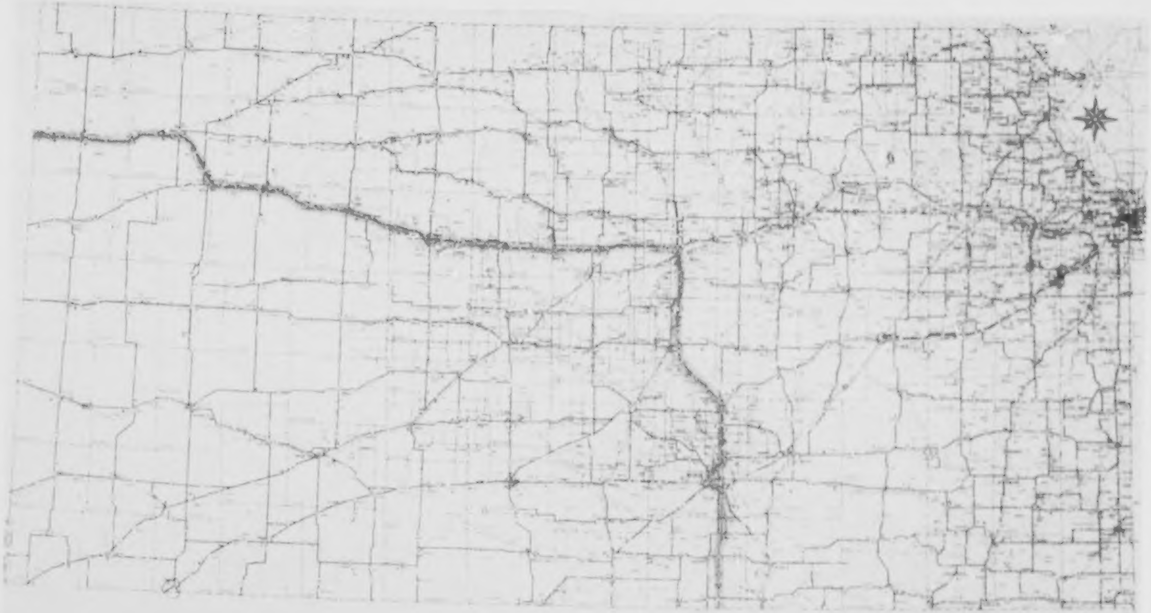
BEST AVAILABLE COPY

INDIANA

BEST AVAILABLE COPY


IOWA
RAIL ROUTE

BEST AVAILABLE COPY



4.13

BEST AVAILABLE COPY

BEST AVAILABLE COPY

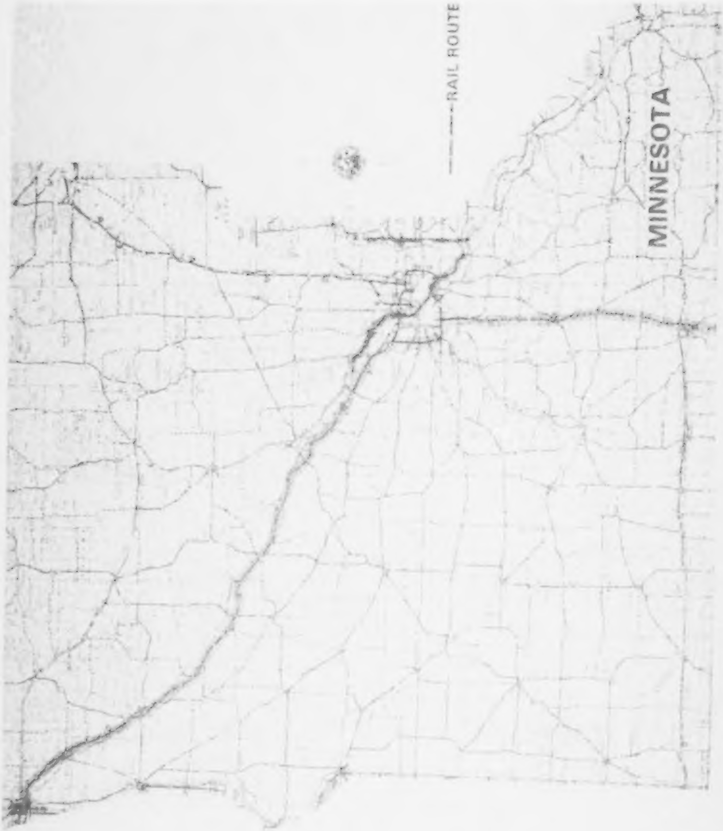
MARYLAND

A.15

BEST AVAILABLE COPY

MICHIGAN
A 15

BEST AVAILABLE COPY

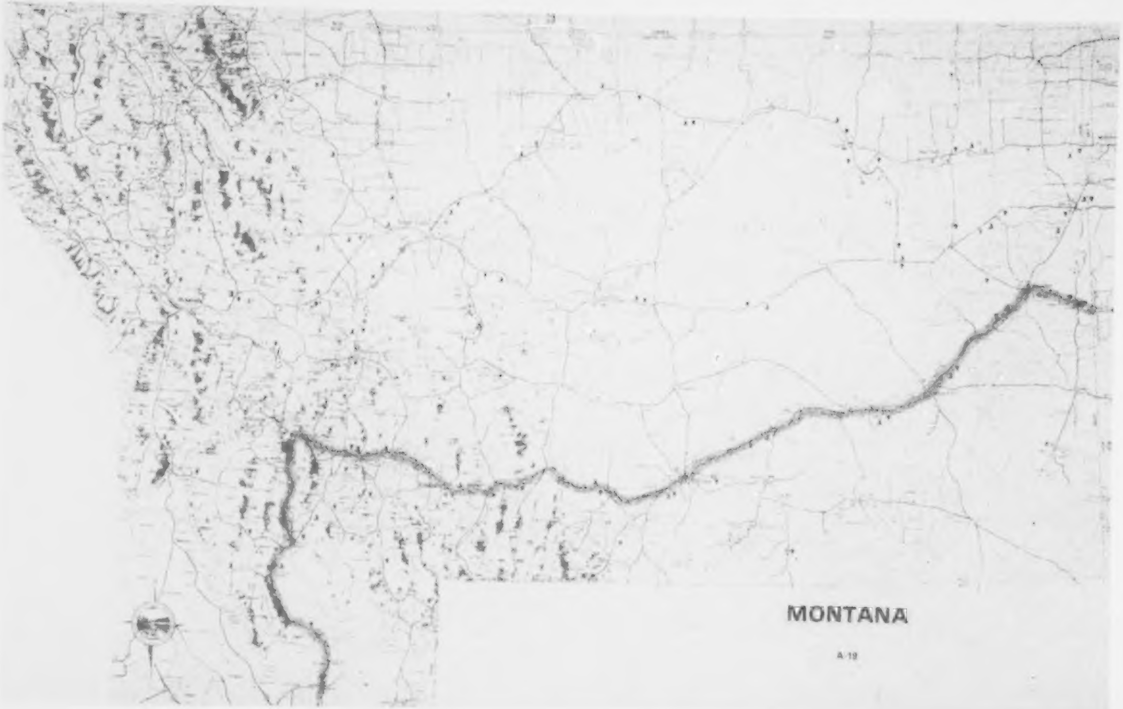

RAIL ROUTE
MINNESOTA

A-17

BEST AVAILABLE COPY

MISSOURI
A-18

BEST AVAILABLE COPY


MONTANA
A-19

BEST AVAILABLE COPY

its sense lines, power, logic, and transmitter elements. An advisory message will be sent in the event that a unit fails to satisfy its self-check test.

SATELLITE RELAY

The message repeater (satellite relay) resides on a GTE Spacenet III/Geostar R01 Satellite, successfully launched on March 11, 1988 by Arianespace. A second repeater is scheduled for launch on a GTE G-Star III/Geostar R02 sometime during the second half of 1988. Both have the capacity to receive signals directly from the Vehicle Units, amplify and retransmit them to the ground station. Each Satellite Repeater is designed with full internal redundancy for high operational reliability and long life.

RAILSTAR CENTRAL

Railstar Central receives the downlink signals from the Satellite message repeater through large antennae and specially designed, high sensitivity radio. The signals will be demodulated and processed in a very powerful multi-stage computer complex, located in Merrimack, New Hampshire.

The unique data encoding is stripped away, the addressed recipient identified, the message decoded and converted to customized user format. Then, in accordance with system requirements, the information is either sent immediately or stored for analysis and, if necessary, for batch forwarding. Based on analytical algorithms embedded in Railstar Central, information that indicates that a vehicle has an unfavorable status, or is developing a trend in physical status that is becoming unfavorable, is sent immediately to the User Management Center together with the appropriate warning or alarm indication.

Railstar Central maintains - as part of its master data base - the ability to identify and catalog vehicles in specific geographic areas. Vehicles can also be identified and catalogued based on commodity, carrier, or other criteria. This data is available to the User Monitoring Center upon request.

Railstar Central also performs further diagnostic checks on incoming data in addition to the self-diagnostic checks performed at the vehicle. These checks include tests to identify and tag suspect data. If data from a particular vehicle is inconsistent, or if the vehicle fails to send pre-programed transmissions, the User Monitoring Center is alerted.

This closed loop methodology assures that all units within the fleet are continuously accounted for - or specifically identified as missing.

USER MONITORING CENTER

The User Monitoring Center (UMC) performs as a command and control center. It receives data from Railstar Central and merge the messaged information updates received with a historical data base resident within it. This process results in the provision of color CRT displays in semi-geographic form for vehicle location and identification, and in textual form for commodity health and other information. Suitable colors are used for highlighting those vehicles with particularly hazardous contents. In addition, color intensity plus flashing rate with audible annunciation focus immediate attention to any vehicle which may be tending toward unfavorable conditions.

Information to be provided for an alarm condition includes - in addition to vehicle location and commodity data - the names and telephone numbers of appropriate local Emergency Response Teams, CHEMTREC, appropriate local, state, and Federal personnel, shipper, consignee and carrier involved.

Possible information display and reporting formats are shown in Figures 5 through 10.

The Exception Report, Figure 5, lists all vehicles which are reporting a physical parameter as being outside a normal control range. These are not all emergency conditions; rather, the intent here is to flag incipient problems before they become serious. The Overview Graphic Display, Figure 6, Page 17, shows a map of the respective geographical area, identifying the vehicle locations with an icon, providing in graphic form the location information presented in the Exception Report text.

```
                             EXCEPTION REPORT

                             10-1-86   09:45

         CAR                                                INT        INT       AMB
ICON    NUMBER     MAT'L    CARRIER     LINE        M.P.   PRESS      TEMP F    TEMP

 A    UTLX12093  2071-35   B & M     E/W MAIN     103    25.1[25]   89          95
 B    RTCX37001  3021-28   B & M     NH MAIN       24    14.3         95[90]    99
 C    CCBX2016   1614-57   D & H     E/W MAIN      74     7.9[7]    64          65
 D    UTLX87860  1970-21   D & H     WASH MAIN    214    26.7[25]     99[95]   105
```

Figure 5. Exception Report

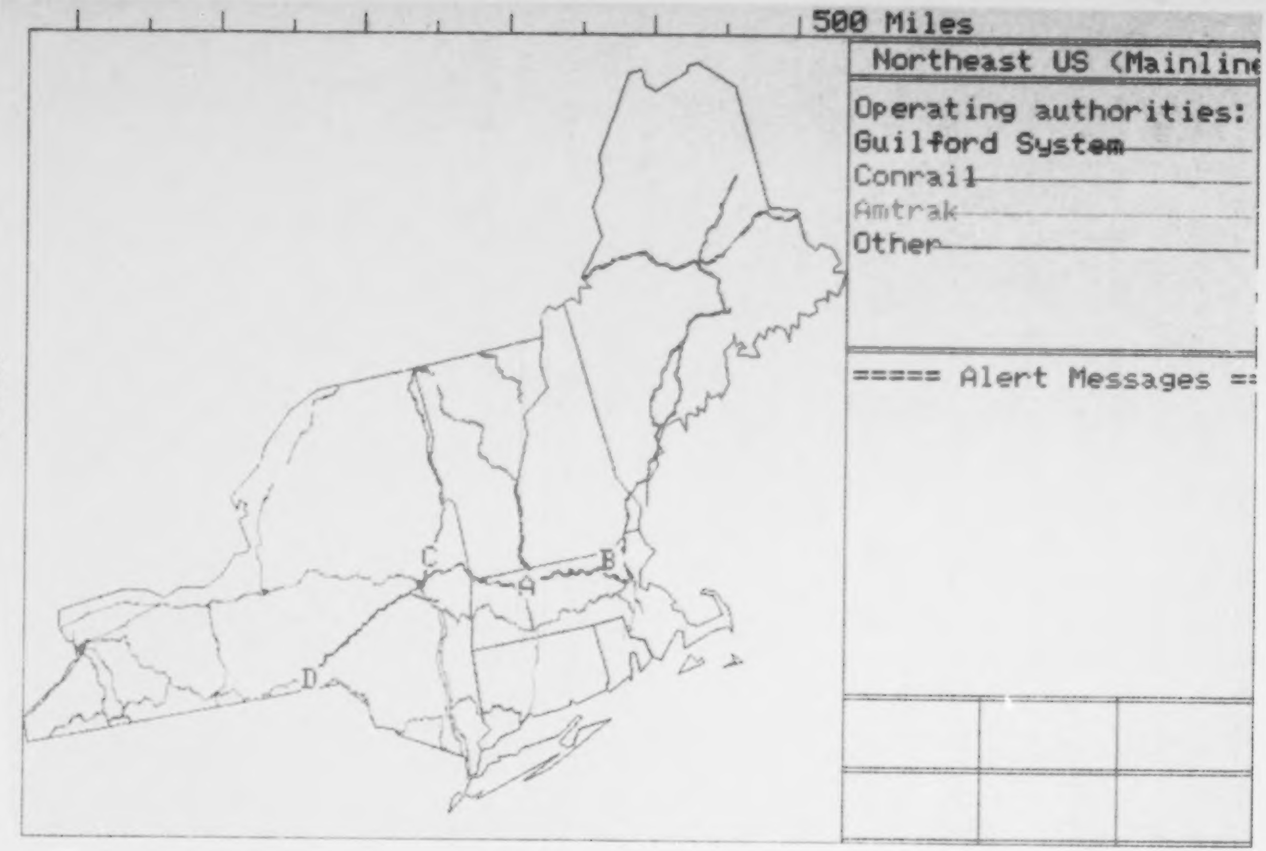
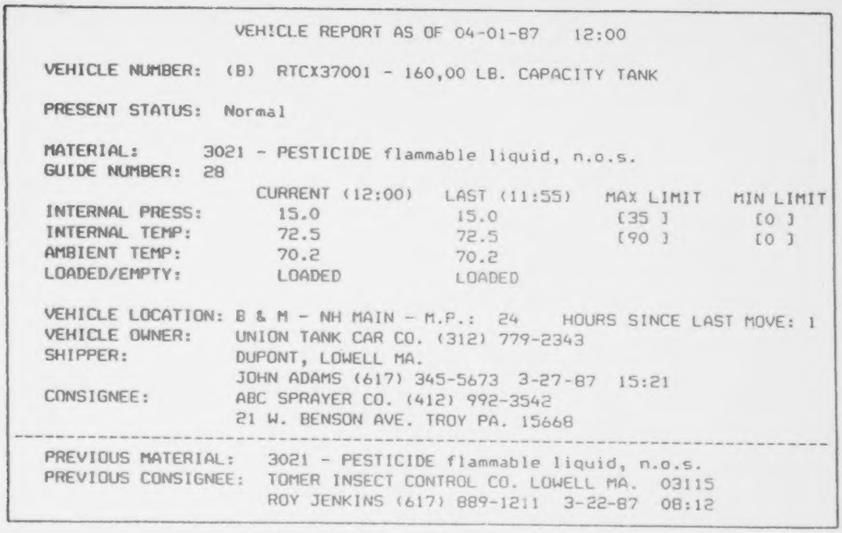

500 Miles
Northeast US (Mainline
Operating authorities:
Guilford System
Conrail
Amtrak
Other
===== Alert Messages ==
A
B
C
D

FIGURE 6

The Vehicle Report, Figure 7, Page 19, provides all the data available on a particular vehicle. It displays the vehicle's present physical status of commodity, in terms of current measurements as well as previous measurements, compared to allowable limits. The vehicle identification, type and present location are provided. In addition, the commodity being carried is identified, together with Chemtrec Guide number for reference in proper handling. The vehicle owner, shipper and consignee are all identified on this report. Finally, as an aid to prompt and proper hazard control, the previous material carried in this vehicle, together with previous consignee, are identified.

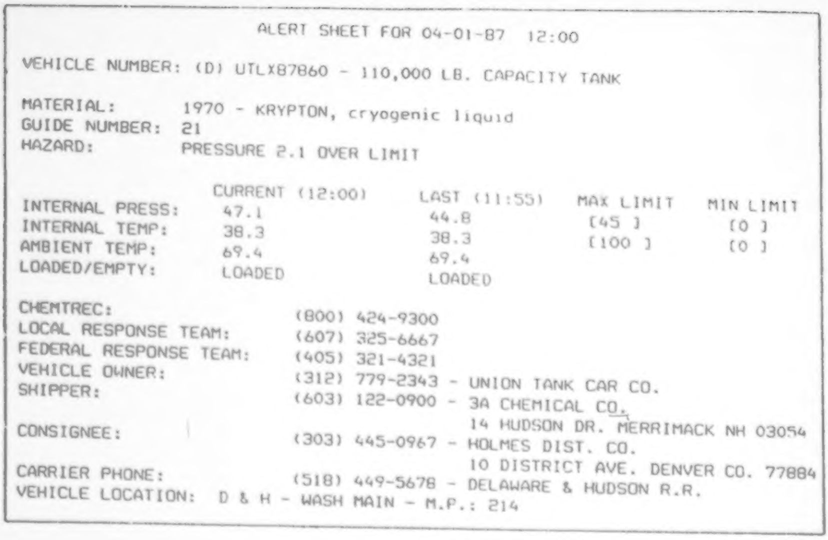
Upon examination of the above data, if the situation warrants an emergency response, the operator will bring up an Alert Sheet Display, Figure 8, Page 20. This display provides the following necessary telephone numbers:

- Chemtrec
- Local Emergency Response Team (determined by reported car location)
- Federal Response Team (for particularly hazardous vehicles)
- Vehicle Owner (Name, Telephone Number)
- Shipper (Name, Address, Telephone Number)
- Consignee (Name, Address, Telephone Number)
- Carrier (Name, Telephone Number)



```
                    VEHICLE REPORT AS OF 04-01-87   12:00

VEHICLE NUMBER:  (B)  RTCX37001 - 160,00 LB. CAPACITY TANK

PRESENT STATUS:  Normal

MATERIAL:       3021 - PESTICIDE flammable liquid, n.o.s.
GUIDE NUMBER:  28
                    CURRENT (12:00)    LAST (11:55)    MAX LIMIT    MIN LIMIT
INTERNAL PRESS:        15.0               15.0           [35 ]        [0 ]
INTERNAL TEMP:         72.5               72.5           [90 ]        [0 ]
AMBIENT TEMP:          70.2               70.2
LOADED/EMPTY:          LOADED             LOADED

VEHICLE LOCATION: B & M - NH MAIN - M.P.:  24    HOURS SINCE LAST MOVE: 1
VEHICLE OWNER:    UNION TANK CAR CO. (312) 779-2343
SHIPPER:          DUPONT, LOWELL MA.
                  JOHN ADAMS (617) 345-5673  3-27-87  15:21
CONSIGNEE:        ABC SPRAYER CO. (412) 992-3542
                  21 W. BENSON AVE. TROY PA. 15668
-----------------------------------------------------------------------------
PREVIOUS MATERIAL:   3021 - PESTICIDE flammable liquid, n.o.s.
PREVIOUS CONSIGNEE:  TOMER INSECT CONTROL CO. LOWELL MA.  03115
                     ROY JENKINS (617) 889-1211  3-22-87  08:12
```

Figure 7.   Vehicle Report



```
                    ALERT SHEET FOR 04-01-87  12:00

VEHICLE NUMBER: (D) UTLX87860 - 110,000 LB. CAPACITY TANK

MATERIAL:        1970 - KRYPTON, cryogenic liquid
GUIDE NUMBER:    21
HAZARD:          PRESSURE 2.1 OVER LIMIT

                  CURRENT (12:00)      LAST (11:55)    MAX LIMIT     MIN LIMIT
INTERNAL PRESS:    47.1                 44.8            [45 ]         [0 ]
INTERNAL TEMP:     38.3                 38.3            [100 ]        [0 ]
AMBIENT TEMP:      69.4                 69.4
LOADED/EMPTY:      LOADED               LOADED

CHEMTREC:                      (800) 424-9300
LOCAL RESPONSE TEAM:           (607) 325-6667
FEDERAL RESPONSE TEAM:         (405) 321-4321
VEHICLE OWNER:                 (312) 779-2343 - UNION TANK CAR CO.
SHIPPER:                       (603) 122-0900 - 3A CHEMICAL CO.
                                                14 HUDSON DR. MERRIMACK NH 03054
CONSIGNEE:                     (303) 445-0967 - HOLMES DIST. CO.
                                                10 DISTRICT AVE. DENVER CO. 77884
CARRIER PHONE:                 (518) 449-5678 - DELAWARE & HUDSON R.R.
VEHICLE LOCATION:  D & H - WASH MAIN - M.P.: 214
```

Figure 8. Alert Sheet Display

Where there is need to look at such an alerted railcar on a precise basis a more accurate, Local Geographic Display may be zoomed in. Figure 9, page 21, shows a sample of such a display. Note that, in the more precise scales, additional information is available. In this display major U.S. highways as well as arterial rail routes are shown.

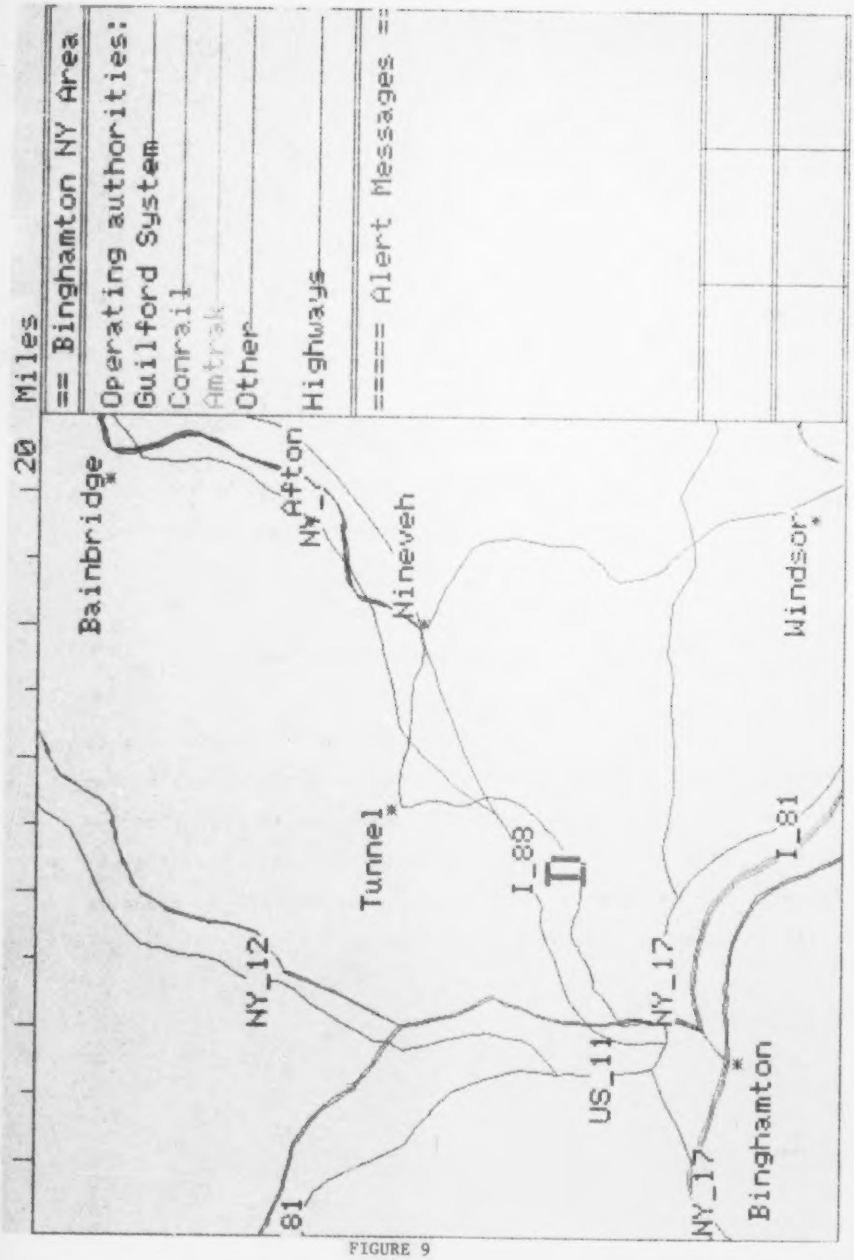

20 Miles
== Binghamton NY Area
Operating authorities:
Guilford System
Conrail
Amtrak
Other
Highways
==== Alert Messages ==
Bainbridge
NY_
Afton
Nineveh
Windsor
Tunnel
I_88
NY_12
NY_17
US_11
NY_17
I_81
81
NY_17
Binghamton

FIGURE 9
21

Finally, for non-critical advisories and inventory purposes, a Phone Data Report, Figure 10, is provided. This report provides telephone numbers for contacting carrier, shipper, or consignee regarding advisories with respect to a particular vehicle.

```
                              PHONE   DATA
                            04-01-87     12:00

        CAR                 CARRIER
ICON   NUMBER      MATL     NAME     CARRIER        SHIPPER        CONSIGNEE

 A    UTLX13093  2071-35    B & M  (617)456-9393  (603)416-9097  (719)435-8009

 B    RTCX37001  3021-28    B & M  (617)456-9393  (617)345-5673  (415)992-3542

 C    CCBX2016   1614-57    D & H  (518)449-5678  (203)445-6781  (607)224-9005

 D    UTLX87860  1970-21    D & H  (518)449-5678  (603)122-0900  (201)445-0967
```

Figure 10. Phone Data Report

User Unit equipped trailers are carried within the system in the same fashion whether riding on the highway or in TOFC service.

For a full system implementation, the UMC may have several terminals, all tied to a common data link through a local SCANTRAK network. In this way, all affected operating departments may have a common information base.

The entire SCANTRAK System is designed to provide the User complex information, which was never before obtainable in real time, in the simplest and most usable format.

SCANHZRC

Mr. **Anderson**. At this time, I'm going to recognize Mr. Samara for his statement. We'll then ask our questions of you.

TESTIMONY OF NOAH A. SAMARA, DIRECTOR, GOVERNMENT AND INTERNATIONAL AFFAIRS, GEOSTAR CORP.

Mr. **Samara**. Thank you.

I am Noah Samara, Director of International and Governmental Affairs of Geostar Corporation.

We appreciate the opportunity to testify on the issues before the subcommittee.

The most recurrent and underlying concerns, the policy underpinnings, if you will, of all the bills before the subcommittee today regard the following four aspects.

—Better routing standards and enforcement.

—Longer records retention by carriers of hazardous materials.

—Proper and early notification to States.

—Finally, and most importantly, better emergency preparedness and response to transportation incidents involving hazardous materials.

I am here, Mr. Chairman, to testify on a new technology that is able to automatically track vehicles and vessels anywhere across the Nation.

Geostar is one of several developers of automatic vehicle tracking systems. This technology addresses the very problems that underlie the concerns expressed here today. This is a technology, Mr. Chairman, that is highly cost-effective, practical, and is here now and here to stay.

The applications and implications of this technology is obvious and urgent, for those categories of exceptionally hazardous materials such as high-level radioactive wastes, and those Bhopal type chemicals like cryogenic fluorine and nitrogen tetroxide chemicals, Mr. Chairman, found to be extremely toxic, corrosive, poisonous, and so deadly that they would require evacuation distances in the event of an accident.

Indeed, both DOD and DOE recognize the applications as well as the implications of this technology when they decided to integrate a requirement for automatic vehicle tracking systems during the transportation of their categories of highly hazardous or sensitive cargo, such as munitions and nuclear waste.

I spoke of low cost, Mr. Chairman. Allow me to furnish an example.

Geostar is presently tracking vehicles across the Nation's highways for only $45.00 per month. The units that are integrated in the mobile units cost $3,000 at a non-mass production level, and are expected to go down to the mid hundreds with mass production.

Automatic vehicle tracking systems allow entities concerned with the shipment of hazardous materials to determine the location of the shipment on a continuous basis, to monitor the movement and the status of the shipment on a desktop or personal computer, if you will. It establishes communications between the mobile units and headquarters.

From a practical point of view, an automatic vehicle tracking system enables maximum emergency preparedness and response coordination. This powerful technology, Mr. Chairman, provides routing information on shipments as they pass through a State or locality.

It allows advanced or real-time notification of the shipments to State officials, and early alert—within seconds—on the occurrence of an accident, the shipment involved, the applicable response procedure, and the nearest and best trained team equipped to deal with the incident.

My written statement, Mr. Chairman, has a more detailed analysis of the numerous applications of this technology for this area that concerns you most.

We believe, Mr. Chairman, that everyone from lawmakers to regulators to industry to the public can only benefit from making such an inexpensive technology a requirement for those commensurately risky activities under DOT's jurisdiction; namely, those chemicals which DOT itself has found to be poisonous hazards requiring evacuation distances in the event of an accident.

The greatest concerns regard what these shipments are, where they are, and how to respond and contain emergencies regarding them. The what, where and how information which this technology provides can be critical to save not a few but a large number of lives.

We believe that no one should compromise public safety and liability with voluntary measures in this area, especially when there are inexpensive technologies that address the very heights of our concern in this necessary hazard in which the Nation must engage.

We therefore urge you to integrate a requirement for automatic vehicle tracking systems in the transportation of exceptionally hazardous materials.

We further believe, Mr. Chairman, that this subcommittee should also encourage the Secretary of Transportation to create an incentive to industry for the voluntary carriage of automatic vehicle tracking systems in the transportation of those less-risky categories of hazardous materials.

These incentives could include, for example, exemptions from certain regulations like prenotification requirements or the logging of transport routes, or simplified licensing procedures for carriers that have automatic vehicle tracking systems.

It is our hope, Mr. Chairman, that this subcommittee will take a hard look at this technology that enables better preparedness and thereby provides a more realistic response system that can adequately protect the public.

I believe, Mr. Chairman, that the requirement on which I have just spoken, as well as the encouragement for incentives to the Secretary of Transportation, can be integrated into H.R. 4069. I agree with the previous panelists that the bill addresses the policy issue affecting transportation.

Thank you, sir.

Mr. **Anderson**. Well, thank you, Mr. Samara.

I've got about three questions here that I wanted to ask you.

So I think that I'll read you the questions out loud, and then I will leave and go vote. In the meantime, you can answer the questions for the staff here, and it will automatically be made part of the record.

At that time, the meeting will be adjourned.

Let me read them—these are the three questions.

First—if you want them repeated, he can read them to you, if you don't remember.

First, in your testimony, you state that the non- mass production cost of installation of your tracking unit in a vehicle is $3,000. That figure would be reduced to the mid hundreds with mass production.

My question is how many units would have to be mass produced to achieve the lower cost?

You can answer that one maybe—second bells haven't rung yet. Why don't you do it, until the second bell?

Mr. SAMARA. I believe it's very hard to give a hard and fast, on that.

Anywhere from, say, 50,000 to 100,000 units would achieve mass production level.

Mr. ANDERSON. 50,000 to 100,000 units to be really mass produced to achieve that lower cost?

Mr. SAMARA. Yes, possibly sir.

I should further add that this technology has many, many applications above and beyond hazardous materials transportation. That level of production is therefore anticipated anyway, as a result of the many other markets that are being developed.

Mr. ANDERSON. If, for the record, you want to correct that, or update it, the record will be kept open for about two or three weeks. So you could put that in, and update it.

Mr. SAMARA. Thank you, sir.

Mr. ANDERSON. My second question was, your statement includes the present Geostar cost of tracing vehicles containing these units at $45.00 per month.

Would the cost for tracking increase or decrease with mass use of this system?

Mr. SAMARA. We are in fact expecting that costs will decrease to about $20.00 in a few years.

Mr. ANDERSON. My third question is, the Railstar witness states that regulating or mandating such a tracking system would hinder the adoption or use of such devices.

Do you share this opinion?

Mr. SAMARA. In some respects, yes, and in some respects, no.

Mr. ANDERSON. The second part is, if so, would you please advise the subcommittee why, and if not, could you please explain why not.

Mr. SAMARA. Well, we agree with Mr. Fotta that these technologies should be implemented on a voluntary basis for the larger category of hazardous materials that pose a less significant risk to the public.

However, everyone can only benefit from making these types of systems a requirement during the transportation of the exceptionally hazardous materials. These highly dangerous chemicals cause the greatest concern for everyone, from regulators to industry to the public. They all want to know what these shipments are, where they are, and how to respond to an emergency.

Such information can be most critical to saving many, many lives, and we believe that maybe from the public safety and liability point of view neither government nor industry should compromise safety with voluntary implementation of this system.

Consider also, Mr. Chairman, the reality of things. Our own experience has shown that safety and efficiency oriented companies are already integrating this technology into their operations. However, you will always have those companies that want to cut corners, either because they lack foresight, or are budget constraint.

As a result, their operation can be deficient, and, they compromise public safety.

A mandate, is really directed to contain such realities. It is basically saying that anyone engaged in the transportation of very, very hazardous—exceptionally hazardous—materials should make public safety paramount.

Mr. ANDERSON. Well, that pretty well concludes the questions and answers.

If there's anything that you want to correct, as I said a moment ago, we'll keep the record open for two or three weeks, and you can just send it in, and we'll correct it.

Mr. SAMARA. Thank you, sir.

[Mr. Samara's prepared statement follows:]

STATEMENT OF

NOAH A. SAMARA

DIRECTOR, GOVERNMENT AND INTERNATIONAL AFFAIRS

GEOSTAR CORPORATION

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

U.S. HOUSE OF REPRESENTATIVES

MAY 19, 1988

MR. CHAIRMAN, AND DISTINGUISHED MEMBERS OF THIS SUBCOMMITTEE, I AM NOAH SAMARA, DIRECTOR FOR INTERNATIONAL AND GOVERNMENTAL AFFAIRS OF GEOSTAR CORPORATION. GEOSTAR APPRECIATES THE OPPORTUNITY TO TESTIFY ON THE ISSUE BEFORE THIS SUBCOMMITTEE AND, WITH YOUR PERMISSION MR. CHAIRMAN, TO SUBMIT ADDITIONAL WRITTEN TESTIMONY FOR THE RECORD.

THE MOST RECURRENT AND UNDERLYING THEMES IN THE 11 BILLS BEFORE THIS SUBCOMMITTEE REGARD (I) BETTER ROUTING STANDARDS AND ENFORCEMENT (II) LONGER RECORD RETENTION BY CARRIERS OF HAZARDOUS MATERIALS (III) PROPER AND EARLY NOTIFICATION TO STATES AND FINALLY AND MOST IMPORTANTLY (IV) BETTER EMERGENCY PREPAREDNESS AND RESPONSE TO TRANSPORTATION INCIDENTS INVOLVING HAZARDOUS MATERIAL.

I AM HERE, MR. CHAIRMAN, TO TESTIFY ON AUTOMATIC VEHICLE TRACKING SYSTEMS WHICH GEOSTAR, AMONG OTHERS, HAS DEVELOPED AND ONE WHICH ADDRESSES THE VERY HEART OF THE PROBLEMS THAT UNDERLIE OUR CONCERNS TODAY; ABOVE ALL MR. CHAIRMAN, I AM HERE TO SPEAK ABOUT A TECHNOLOGY THAT IS HIGHLY COST-EFFECTIVE AND PRACTICAL.

AUTOMATIC VEHICLE TRACKING SYSTEMS ALLOW ALL ENTITIES CONCERNED WITH THE SHIPMENT OF HAZARDOUS MATERIALS TO (I) DETERMINE THE LOCATION OF THE SHIPMENT ON A CONTINUOUS BASIS (II) MONITOR, *ON A DESK-TOP PERSONAL COMPUTER*, THE MOVEMENT AND STATUS OF THE CARGO AND (III) ESTABLISH COMMUNICATION BETWEEN MOBILE UNITS AND FIXED HEADQUARTERS. AUTOMATIC VEHICLE TRACKING SYSTEMS ALLOW SHIPPERS AND REGULATORS TO KNOW THE LOCATION OF HAZARDOUS MATERIAL SHIPMENTS AND TO ESTABLISH COMMUNICATIONS LINKS FOR AN EARLY DETERMINATION OF THE CHARACTERISTICS OF THE SHIPMENTS AND ANY EMERGENCY RESPONSE REQUIREMENTS.

THE APPLICATIONS OF THIS TECHNOLOGY BECOME ALL THE MORE URGENT IN THOSE CATEGORIES OF HAZARDOUS MATERIALS THAT ARE DEADLY, TOXIC BY INHALATION AND/OR REQUIRING EVACUATION DISTANCES IN THE EVENT OF AN ACCIDENT. INDEED, IN RECOGNITION OF THIS FACT, BOTH DOD AND DOE ARE INTEGRATING AN AUTOMATIC VEHICLE TRACKING SYSTEM REQUIREMENTS FOR THE TRANSPORTATION OF HIGHLY HAZARDOUS OR SENSITIVE CARGO, SUCH AS MUNITIONS AND NUCLEAR WASTE. GEOSTAR BELIEVES THAT A SIMILAR EXTENSION OF THIS REQUIREMENT TO COMMENSURATELY RISKY ACTIVITIES UNDER DOT'S JURISDICTION -- SUCH AS THE CHEMICALS DOT HAS FOUND TO REQUIRE EVACUATION DISTANCES IN THE EVENT OF AN ACCIDENT -- WILL BE APPROPRIATE.

FROM A PRACTICAL POINT OF VIEW AN AUTOMATIC VEHICLE TRACKING SYSTEM ENABLES MAXIMUM EMERGENCY PREPAREDNESS AND RESPONSE COORDINATION. THIS POWERFUL TECHNOLOGY PROVIDES (I) ROUTING INFORMATION ON SHIPMENTS AS THEY PASS THROUGH A STATE OR LOCALITY (II) PRE-NOTIFICATION ON SHIPMENTS AS THEY PASS THROUGH A GIVEN JURISDICTION AND (III) EARLY ALERT ON THE OCCURRENCE OF AN ACCIDENT, THE SHIPMENT INVOLVED, THE APPLICABLE RESPONSE PROCEDURE AND THE NEAREST BEST TRAINED TEAM EQUIPPED TO DEAL WITH THE INCIDENT.

FROM A COST POINT OF VIEW, GEOSTAR, FOR INSTANCE, IS PRESENTLY TRACKING VEHICLES ACROSS THE NATIONS HIGHWAYS FOR ONLY \$45.$^{\underline{00}}$ PER MONTH. THE UNITS THAT ARE INTEGRATED IN THE MOBILE VEHICLES COST \$3,000 AT A NON-MASS PRODUCTION LEVEL AND ARE EXPECTED TO GO DOWN TO THE MID-HUNDREDS WITH MASS PRODUCTION.

WE URGE THIS SUBCOMMITTEE TO TAKE A HARD LOOK AT THE OBVIOUS APPLICATIONS OF AUTOMATIC VEHICLE TRACKING SYSTEMS. WE ALSO URGE THE SUBCOMMITTEE TO INTEGRATE A NARROWLY DEFINED REQUIREMENT FOR AUTOMATIC VEHICLE TRACKING SYSTEMS IN THE TRANSPORTATION OF THOSE HAZARDOUS MATERIALS WHICH ARE FOUND TO BE DEADLY, TOXIC BY INHALATION AND/OR REQUIRING EVACUATION DISTANCES IN THE EVENT OF AN ACCIDENT. THIS SUBCOMMITTEE SHOULD ALSO ENCOURAGE THE SECRETARY OF TRANSPORTATION TO CREATE AN INCENTIVE TO INDUSTRY FOR THE VOLUNTARY CARRIAGE OF AUTOMATIC VEHICLE TRACKING SYSTEMS IN THE TRANSPORTATION OF OTHER CATEGORIES OF HAZARDOUS MATERIALS.

THE GEOSTAR TECHNOLOGY

THE GEOSTAR TECHNOLOGY IS AN AUTOMATIC VEHICLE TRACKING SYSTEM THAT IS GENERICALLY CALLED RADIO DETERMINATION SATELLITE SERVICE, OR RDSS. THE RDSS SYSTEM IS A NEW CONCEPT IN SATELLITE TECHNOLOGY. THE SYSTEM IS COMPRISED OF (1) A SPACE SEGMENT CONSISTING OF TWO OR MORE SATELLITES (2) A GROUND SEGMENT MADE UP OF COMPUTERS AND EARTH STATIONS AND (3) A USER SEGMENT THAT IS SMALL ENOUGH TO BE OPERATED BY BATTERY AND CARRIED IN ONE'S HAND OR POCKET. THE USER UNITS CAN ALSO BE INSTALLED ABOARD AN AIRCRAFT, LAND VEHICLE, RAIL CAR OR SEA VESSEL.

USING THESE THREE COMPONENTS, RDSS PROVIDES TWO BASIC SERVICES: (1) ACCURATE POSITION LOCATION OF THE USER UNITS AND (2) A MESSAGING SERVICE BETWEEN USER UNITS. THUS, USING RDSS, THE STATUS AND LOCATION OF ALL HAZARDOUS MATERIALS BEING TRANSPORTED CAN BE MONITORED AT ALL TIMES AND A CONTINUOUS COMMUNICATIONS LINK

CAN BE ESTABLISHED BETWEEN MOBILE UNITS AND THE GOVERNMENTAL AUTHORITIES CHARGED WITH THEIR SAFE PASSAGE.

THE RDSS SYSTEM PRINCIPLE

THE PROCESS OF POSITION DETERMINATION CAN BE INITIATED IN THREE DIFFERENT WAYS IN THE RDSS SYSTEM: FROM THE GROUND STATION, THE USER UNITS (AT THE USER'S OPTION) OR BY PROGRAMMING THE UNITS TO RESPOND AUTOMATICALLY IN PREDETERMINED INTERVALS.

AN AUTHORIZED PERSON TRYING TO KNOW THE POSITION OF A GIVEN MOBILE UNIT WOULD SEND A REQUEST TO THE GROUND STATION. THE GROUND STATION SENDS OUT INTERROGATION SIGNALS TO ALL USER UNITS TO INITIATE A RESPONSE FROM THE UNITS. EACH USER UNIT HAS A PERSONAL IDENTIFICATION CODE -- OR A "FINGERPRINT" -- WHICH IS PART AND PARCEL OF EVERY TRANSMISSION MADE. THUS, THE RESPONSE TO THE INTERROGATION SIGNAL WILL IDENTIFY THE PARTICULAR USER UNIT. FURTHER, THE RESPONSE FROM THE USER UNIT IS TRANSMITTED TO TWO OR MORE SATELLITES IN SPACE WHICH RECEIVE AND RELAY THE SIGNAL BACK TO THE GROUND STATION AT SLIGHTLY DIFFERENT TIMES. THE GROUND STATION -- WHICH KNOWS THE LOCATION OF THE SATELLITES AS WELL AS THE DIFFERENT TIME THE SIGNALS ARRIVE -- USES THESE SPACE AND TIME REFERENCES TO TRIANGULATE THE USER'S POSITION TO AN ACCURACY OF SEVERAL METERS. THE POSITION INFORMATION WITH REGARD TO THAT PARTICULAR USER IS THEN SENT TO THE AUTHORIZED PERSON REQUESTING THE INFORMATION.

A USER REQUIRING POSITION INFORMATION CAN ALSO INITIATE THE PROCESS BY TRANSMITTING A SIGNAL DIRECTLY TO THE SATELLITES IN SPACE; THE SATELLITES RECEIVE AND RELAY THE SIGNAL BACK TO THE GROUND STATION WHICH CALCULATES THE POSITION OF THE USER UNIT IN THE SAME MANNER DESCRIBED ABOVE.

FINALLY, RDSS UNITS CAN ALSO BE PROGRAMMED TO TRANSMIT SIGNALS TO THE CENTRAL STATION AT A PRE-SET TIME (FOR EXAMPLE, EVERY HOUR, ETC). ALTERNATIVELY, THE UNITS CAN ALSO BE INTERCONNECTED TO PRESSURE, TEMPERATURE OR OTHER GAUGES IN THE VEHICLE AND BE MADE TO TRANSMIT A SIGNAL UPON THE OCCURRENCE OF AN ABNORMALITY.

THE SIGNAL IN A RDSS SYSTEM CAN CARRY A MESSAGE OF ABOUT 100 CHARACTERS. THUS, USERS ARE ABLE TO BOTH RECEIVE AND SEND MESSAGES. MORE IMPORTANTLY, THE RDSS SYSTEM CAN ALSO "BROADCAST" MESSAGES TO A PREDETERMINED GROUP OF USERS -- A

FUNCTION PARTICULARLY IMPORTANT IN THE COORDINATION OF DISPARATELY SITUATED EMERGENCY RESPONSE TEAMS.

THE ENTIRE PROCESS OF POSITION DETERMINATION AND ADDRESSED MESSAGE RELAY TAKES UNDER ONE (1) SECOND TO COMPLETE.

A SINGLE RDSS SYSTEM CAN PROCESS OVER 18 MILLION TRANSMISSIONS PER HOUR, WHICH MAKES THE TRACKING OF ALL MATERIALS BEING TRANSPORTED IN THE UNITED STATES FEASIBLE.

SPECIFIC APPLICATIONS OF AUTOMATIC VEHICLE TRACKING SYSTEMS

AUTOMATIC VEHICLE TRACKING SYSTEMS (SUCH AS RDSS) CAN PROVIDE AN EFFECTIVE SOLUTION IN THE COORDINATION OF EMERGENCY RESPONSES. SPECIFICALLY, THEY WILL:

- *PROVIDE A REAL-TIME UPDATE ON THE EXACT POSITIONS OF ALL HAZARDOUS MATERIALS BEING TRANSPORTED.* LOCAL, STATE AND FEDERAL AUTHORITIES CAN MONITOR THE LOCATIONS OF HAZARDOUS MATERIALS ON A DISPLAY SCREEN AS THEY PASS FROM ONE JURISDICTION TO ANOTHER.

- *PROVIDE A MECHANISM FOR DECLARING THE MANIFEST OF CONTENTS AS WELL AS THE NATURE OF THE HAZARDOUS MATERIAL BEING TRANSPORTED ON EACH MOBILE UNIT IN A COST-EFFECTIVE, ADMINISTRATIVELY EFFICIENT MANNER.* THUS, ALL AUTHORITIES CONCERNED WILL KNOW THE TYPE OF HAZARDOUS MATERIAL BEING TRANSPORTED IN THEIR AREA OF JURISDICTION IN REAL-TIME.

- *PROVIDE A MECHANISM FOR LOGGING THE TRANSPORT ROUTES OF HAZARDOUS MATERIALS BEING TRANSPORTED IN EACH JURISDICTION*. THIS PARTICULAR APPLICATION CAN ADDRESS THE CONCERN OF A GROWING NUMBER OF JURISDICTIONS THAT ARE IMPOSING REQUIREMENTS THAT SHIPPERS AND CARRIERS MAKE NOTIFICATION OF THEIR INTENT TO SHIP HAZARDOUS MATERIALS THROUGH THE JURISDICTION. AUTOMATIC VEHICLE TRACKING SYSTEMS WILL MINIMIZE THE CREATION OF VOLUMINOUS ROUTE RECORDS FOR ALL HAZARDOUS MATERIALS BEING TRANSPORTED AND ACHIEVE THE NEED FOR THE RETENTION OF RECORDS VIA THE CENTRAL STATIONS. SINCE PRE-NOTIFICATION OF TRANSPORTATION ROUTES WILL BE DONE ON REAL-TIME BASIS AND DISPLAYED ON SCREENS, RDSS WILL ALSO ADDRESS THE CONCERNS OF SHIPPERS THAT THESE REGULATIONS ARE "PRODUCING HUGE VOLUMES OF WORTLESS PAPER." (SEE MR. JOHN CURRIE'S STATEMENT ON BEHALF OF THE AMERICAN TRUCKING

ASSOCIATION , APRIL 24, 1987). AUTOMATIC VEHICLE TRACKING SYSTEMS CAN ALSO BE USED TO DEVELOP FLOW STUDIES ON THE TRANSPORTATION OF HAZARDOUS MATERIALS.

- *AUTOMATIC VEHICLE TRACKING SYSTEMS WILL ENABLE STATE AND LOCAL GOVERNMENTS TO ENSURE THAT TRANSPORTERS OF HAZARDOUS MATERIALS ARE FOLLOWING THEIR DESIGNATED ROUTES.* THESE SYSTEMS CAN PROVIDE IMMEDIATE NOTIFICATION TO THE DRIVER, THE SHIPPER AND LAW ENFORCEMENT ON WHETHER OR NOT A SHIPMENT IS FOLLOWING A PROPERLY DESIGNATED ROUTE.

- *PROVIDE A TOOL FOR APPROXIMATING VEHICLE SPEED.* AUTOMATIC VEHICLE TRACKING SYSTEMS, SUCH AS RDSS, HAVE THE CAPABILITY TO PROVIDE ACCURATE POSITIONING AS WELL AS DIRECTION DATA ON A CONTINUOUS BASIS; THUS THEY CAN PROVIDE A PREVENTIVE TOOL TO LAW-ENFORCEMENT AUTHORITIES BY ENABLING THEM TO APPROXIMATE THE SPEED OF CARRIERS OF HAZARDOUS MATERIALS.

- *PROVIDE A MECHANISM FOR THE POSITIONING OF EMERGENCIES WHENEVER AND WHEREVER THEY OCCUR.* THE CAPABILITY TO ALERT AUTHORITIES UPON THE OCCURRENCE OF EMERGENCIES PROVIDES THE SOLUTION FOR REDUCING THE RESPONSE TIME TO THE INCIDENT. THE AUTOMATIC PROVISION OF POSITION INFORMATION FURTHER REDUCES THE TIME THAT CAN POTENTIALLY BE SPENT IN LOCATING THE EMERGENCY. HOWEVER, PROBABLY THE MOST IMPORTANT APPLICATION IN THIS AREA IS THE FACT THAT SUCH SYSTEMS CAN PROVIDE POTENTIALLY LIFE-SAVING DATA ON THE NATURE AND APPROPRIATE RESPONSE PROCEDURE REGARDING LESS KNOWN HAZARDOUS MATERIALS. THIS APPLICATION BECOMES ALL THE MORE EVIDENT WHEN ONE CONSIDERS THE INCIDENT REGARDING THE NAVY TORPEDOS WHICH SENATOR WIRTH RECOUNTED IN HIS TESTIMONY BEFORE SENATE AND HOUSE COMMITTEES; IF SUCH SYSTEMS WERE AVAILABLE THEN, THE CITY OF DENVER WOULD NOT HAVE BEEN "TIED UP FOR NEARLY AN ENTIRE DAY" DETERMINING WHETHER THE TORPEDOS WERE ARMED. FURTHER, WHILE THE NEED FOR ADEQUATE TRAINING REMAINS TO BE OF PARAMOUNT IMPORTANCE FOR RESPONDING TO EMERGENCIES, AUTOMATIC VEHICLE TRACKING SYSTEMS CAN PROVIDE A STOP-GAP MEASURE UNTIL THE RECOMMENDED TRAINING PROGRAMS ARE FULLY IMPLEMENTED; AND CAN SERVE AS BACK-UP RESOURCE, IN THE EVENT ADEQUATELY TRAINED RESPONSE TEAMS DEAL WITH HAZARDOUS MATERIALS THAT (1) LACK ADEQUATE DESCRIPTION/INFORMATION REGARDING THE SUBSTANCE INVOLVED OR (2) WERE NOT COVERED BY THEIR PARTICULAR TRAINING PROGRAMS.

- *PROVIDE A TOOL FOR COORDINATING EMERGENCY RESPONSE TEAMS THAT ARE DISPARATELY LOCATED OR SITUATED.* HAZARDOUS MATERIAL INCIDENT RESPONSES ARE

NOT ONLY COMPLICATED BY THE NUMEROUS FEDERAL, STATE AND LOCAL REGULATIONS, BUT ALSO BY THE EXISTENCE OF VARIOUS RESPONSE TEAMS WITH OVERLAPPING JURISDICTIONS. AUTOMATIC VEHICLE TRACKING SYSTEMS CAN LINK AND COORDINATE ALL THE VARIOUS RESPONSE TEAMS THAT WOULD BE INVOLVED IN A GIVEN INCIDENT. IN ADDITION TO INTEGRATING THE RESPONSE TEAM, THE CAPABILITY WILL ALSO REDUCE AND SYNCHRONIZE THE TIME OF RESPONSE OF THE VARIOUS AUTHORITIES INVOLVED.

- *PROVIDE AN INTERCONNECTION WITH OTHER SENSORS ON A VEHICLE TO TRIGGER A SIGNAL ALARM IN THE EVENT OF AN ABNORMAL SENSOR READING OR AN EMERGENCY.* AUTOMATIC VEHICLE TRACKING SYSTEMS' UNIT CAN BE INTERCONNECTED, FOR EXAMPLE, TO PRESSURE OR TEMPERATURE GAUGES IN A CARRIER OF HAZARDOUS MATERIALS; THE UNIT WOULD AUTOMATICALLY EMIT AN ALARM SIGNAL IF ABNORMALITIES OCCUR. THIS APPLICATION IS PARTICULARLY IMPORTANT IF AN OPERATOR IS DISABLED OR UNAWARE OF AN IMPENDING EMERGENCY.

COST CONSIDERATIONS AND IMPLEMENTATION

GEOSTAR CORPORATION WILL CHARGE \$45.$^{\underline{00}}$ PER MONTH FOR TRACKING A VEHICLE ANYWHERE ACROSS THE NATION. A SINGLE TRANSACTION INVOLVING A POSITION FIX AND THE TRANSMISSION OF A 100-CHARACTER SIGNAL WILL COST 0.05 CENTS. THE MOBILE UNITS PRESENTLY PRICED AT \$3,000 ARE EXPECTED TO GO DOWN TO THE MID-HUNDREDS WHEN MASS PRODUCTION BEGINS.

SUMMARY AND RECOMMENDATIONS

AUTOMATIC VEHICLE TRACKING SYSTEMS HAVE SPECIFIC AND UNIQUE APPLICATIONS FOR THE SAFE TRANSPORTATION OF HAZARDOUS MATERIALS. THESE SYSTEMS PROVIDE A FEASIBLE AND COST-EFFECTIVE ALTERNATIVE FOR THE OTHERWISE OVERWHELMING TASK OF TRACKING THE TRANSPORTATION OF HAZARDOUS MATERIALS. THESE SYSTEMS WILL NEITHER CREATE ADDITIONAL BURDENS ON CONCERNED AUTHORITIES NOR PROLIFERATE USELESS DATA AND PAPERWORK. AUTHORITIES ARE INSTANTANEOUSLY APPRISED UPON THE OCCURRENCE OF AN INCIDENT; THEY WILL ALSO HAVE ACCESS TO RELEVANT DATA REGARDING THE PARTICULAR INCIDENT AND THE APPROPRIATE METHOD OF RESPONSE. AUTOMATIC VEHICLE TRACKING SYSTEMS ALSO PROVIDE A USEFUL MECHANISM FOR PLANNING EMERGENCY RESPONSE; THEY CREATE A TWO-WAY LINK AMONG THE VARIOUS AUTHORITIES WITHIN A JURISDICTION AS WELL AS A LINK BETWEEN THE AUTHORITIES AND THE CARRIERS AND SHIPPERS OF HAZARDOUS MATERIALS. GEOSTAR'S AUTOMATIC VEHICLE TRACKING SYSTEM WILL BE PROVIDED ON A NATIONWIDE BASIS AND INTERNATIONAL IMPLEMENTATION IS ALSO UNDERWAY.

SINCE AUTOMATIC VEHICLE TRACKING SYSTEMS PROVIDE A COST-EFFECTIVE TECHNOLOGICAL SOLUTION FOR THE CONCERNS RAISED IN THESE HEARINGS, WE BELIEVE INTEGRATING AN ALBEIT LIMITED REQUIREMENT WILL GREATLY ENHANCE THE POLICY OBJECTIVES OF THE HAZARDOUS MATERIALS TRANSPORTATION ACT; AUTOMATIC VEHICLE TRACKING SYSTEMS WILL "IMPROVE THE REGULATORY AND ENFORCEMENT AUTHORITY OF THE SECRETARY OF TRANSPORTATION TO PROTECT THE NATION ADEQUATELY AGAINST THE RISKS TO LIFE AND PROPERTY WHICH ARE INHERENT IN THE TRANSPORTATION OF HAZARDOUS MATERIALS IN COMMERCE."

TOWARDS THIS END, WE RECOMMEND THAT THIS SUBCOMMITTEE CAREFULLY ASSESS THE IMPLICATIONS OF THIS TECHNOLOGY FOR THE TRANSPORTATION OF HAZARDOUS MATERIAL SHIPMENTS AND REQUIRE THE SECRETARY OF TRANSPORTATION TO :

(1) DEVELOP A REQUIREMENT FOR AN AUTOMATIC VEHICLE TRACKING SYSTEM IN THE TRANSPORTATION OF HIGHLY DANGEROUS MATERIALS FOUND TO BE TOXIC BY INHALATION AND/OR REQUIRING EVACUATION DISTANCES IN THE EVENT OF AN ACCIDENT; AND FURTHER

(2) CREATE INCENTIVES FOR THE VOLUNTARY CARRIAGE OF AN AUTOMATIC VEHICLE TRACKING SYSTEMS FOR OTHER CATEGORIES OF HAZARDOUS MATERIALS THAT ARE SHIPPED. THESE INCENTIVES COULD, FOR EXAMPLE, INCLUDE EXEMPTIONS FROM CERTAIN REGULATIONS – LIKE PRE-NOTIFICATION REQUIREMENTS OR THE LOGGING OF TRANSPORT ROUTES – OR SIMPLIFIED LICENSING PROCEDURES FOR CARRIERS OF AUTOMATIC VEHICLE TRACKING SYSTEMS.

THIS REQUIREMENT AND INCENTIVE PROGRAM CAN BE INTRODUCED AND ENFORCED THROUGH EXISTING DOT STRUCTURES WITH MINIMAL OR NO ADDITIONAL COST TO GOVERNMENT. AUTOMATIC VEHICLE TRACKING SYSTEMS WILL INTRODUCE NUMEROUS SAFETY FEATURES IMMEDIATELY AND REMAIN LESS BURDENSOME ON AUTHORITIES AND THE INDUSTRY CONCERNED WITH THE TRANSPORTATION OF HAZARDOUS MATERIALS.

GEOSTAR IS WILLING AND READY TO COOPERATE WITH INDUSTRY AND GOVERNMENT AT ALL LEVELS TO ENSURE THE SAFE TRANSPORTATION OF HAZARDOUS MATERIALS THROUGHOUT OUR NATION AND ITS WATERS.

Mr. Anderson. If there's nothing more at this time, we will conclude the hearing for today.

The hearings will resume, however, next Wednesday, May 25, and our subcommittee will be in recess until then.

Thank you very, very much.

We are now in recess until May 25.

[Whereupon, at 3:40 p.m., the subcommittee recessed.]

TRANSPORTATION OF HAZARDOUS MATERIALS

WEDNESDAY, MAY 25, 1988

House of Representatives,
Subcommittee on Surface Transportation,
Committee on Public Works and Transportation,
Washington, DC.

The subcommittee met, pursuant to recess, at 10:15 a.m., in room 2167, Rayburn House Office Building, Hon. Glenn M. Anderson (chairman of the subcommittee) presiding.

Mr. **Anderson**. The meeting of the subcommittee will come to order.

Today the subcommittee resumes its hearings on transportation of hazardous materials. This is the last day of the scheduled hearings. Last week the witnesses offered many insights into the problems involved in the transportation of hazardous materials, and a review of the testimony which will be given today indicates a similar pattern. I appreciate the concerns expressed by the witnesses and I look forward to working with all of them on this important matter.

Our first witness today is one of our colleagues, the Honorable John G. Rowland. We do have your prepared statement, so you can read, extemporize, any way you wish. The floor is yours.

TESTIMONY OF HON. JOHN G. ROWLAND, A REPRESENTATIVE IN CONGRESS FROM CONNECTICUT

Mr. **Rowland** of Connecticut. Thank you very much, Mr. Chairman. First let me thank you and the rest of the committee for this opportunity to testify this morning.

Very simply, I would submit that the time has come for both the House and the Senate to come to terms with one simple fact. That fact is that our current statute governing the routing of nuclear waste over the Nation's highway system does not work. The procedures contained within the Hazardous Material Transportation Act attempt on one hand to establish national standards over the designation of highway routes, yet on the other hand any municipality is free to try and veto such standards by seeking a waiver from the designated route under the nonpreemption determination process.

A classic example of the need for uniform routing standards is borne out by the current battle between the city of New York and the State of Connecticut over the transport of spent nuclear fuel from the Brookhaven National Laboratory on Long Island. Mr. Chairman, as you know, the city has invoked the nonpreemption determination procedure to avoid having this spent nuclear fuel traverse the metropolitan area. Alternatively, they propose to load the material on barges, send it across Long Island Sound, send it across the State of Connecticut, and then truck it out to its final site in Idaho.

This controversy has preoccupied a significant amount of my time since I entered Congress in 1985. By way of background, my district would be the most impacted if New York were to win its bid.

In looking at the need for reform to the nuclear waste transportation laws, I will note that New York City's attempts to evade responsibility for Brookhaven are now 12 years old, yet no end is in sight. To be specific on this issue, New York City has lost in the court of appeals. They have lost in the Supreme Court. They have lost every administrative action which has been decided to date. Now, however, the city's legal representatives are back in court, suing DOT and rehashing the same old arguments.

I am confident that the history will repeat itself and that the city will lose once again in the current filing before the U.S. District Court for the Southern District of New York. The problem is, the process can go on forever and ever, with New York filing a litany of appeals.

Quite frankly, there is an even bigger problem. If New York does prevail, I would suggest and would know that, for example, both Danbury and Waterbury—two cities in my district along the route—could make virtually the same case for a nonpreemption determination as New York. The end result would be a continuation of this fight, with years of costly litigation. Additionally, I fear that a decision in New York's favor could trigger a nationwide avalanche of similar filings by municipalities who will seek to duplicate the city's success in this precedent-setting case.

Although I am somewhat sympathetic to circumstances which might be unique to localities, and therefore warrant the granting of special treatment in the form of a nonpreemption determination, I am afraid the law as it currently stands affords too much of an opportunity for abuse of the process. As such, it would be my recommendation that some type of finality be established to the routing process. While I am hesitant to advocate a complete elimination of the nonpreemption determination, I do believe at a minimum the threshold tests for applicability should be raised.

Mr. Chairman, Congress needs to fish or cut bait on this particular issue. Either we provide for uniform routing standards or we don't. If the latter is going to become the case, then I suggest it would become impossible to safely and swiftly transport nuclear fuels and materials to their final disposal sites. The end result would be chaos.

A better way to proceed might be in the direction proposed through H.R. 4069. This legislation was drafted by the Department of Transportation in an effort to bring about a better resolution for routing disputes, and I believe the measure warrants careful consideration by your committee.

In closing, I appreciate the opportunity to testify this morning and I would be happy to answer any questions that you might have.

Mr. ANDERSON. Well, thank you very much for your statement, John.

John, you recommend that the threshold tests of applicability of nonpreemption determinations be raised. How would you suggest that that be done?

Mr. **Rowland** of Connecticut. Well, Mr. Chairman, without giving any particular specifics, right now anyone can file for a nonpreemption determination, and I think we need to set some standards or at least some type of a test that would determine that there are special circumstances. If you have every municipality along a designated route with the ability to file for nonpreemption determination, the process will go on for ever and ever.

New York, for example, merely claims that the area that they want to use as a route is too populated, and they therefore propose that they put the material on barges and go across Long Island Sound. Quite frankly, the population matter really isn't a unique situation to New York, so I would suggest that in some way DOT, through regulations or through the legislation, propose some type of a standard that must be met or a unique situation before they can file for a nonpreemption determination.

If we cannot designate those specifics, I would then suggest that we have some type of a finality to the process: x amount of claims can be made, or perhaps a position where some court will make the final decision, because right now, as we have seen with New York, it has gone on for 12 years. They continue to file claims. They continue to take it to another court. Due process is being abused at this point, and so I think we need to say this is going to be the final stage. If you have looked at the background on this particular case, DOT has been very firm in their statements.

Any way you look at it, Mr. Chairman, we need national standards. It becomes a parochial, municipality-by-municipality battle, and I think it becomes a severe political problem, so we need to look to DOT with national standards to determine the best possible route and the safest route.

Mr. **Anderson**. Mr. Packard?

Mr. **Packard**. Thank you, Mr. Chairman.

I presume, Mr. Rowland, that the problems that Connecticut is having could be also expressed by the other States between New York and Idaho having the same kinds of problems. Do you think the problems that Connecticut has to deal with in the transporting of hazardous waste have differences from some of the other States that would require different regulations?

Mr. **Rowland** of Connecticut. Mr. Packard, let me first say that Connecticut does transport their unspent fuel. We have a routing process. Most of our utility companies produce x amount of fuel that is then sent out to Idaho or other facilities, and so we take care of the fuel that comes through our particular State.

The concern that I have is twofold: number one, the precedent that would be set if New York were to get this very special exemption, if they were allowed to designate their own route based on, for all practical purposes, political considerations. The other concern, I think, is that if you then—as I said in my testimony—allowed New York this nonpreemption determination, what is to stop every municipality along the route in Connecticut from filing for that same nonpreemption determination? What you have is chaos. You have no standards, and nothing will move.

There is other legislation floating around that talks about exempting particular municipalities over a certain population. In other words, I think the legislation says something to the effect that any municipality with more than 50,000 people will be exempt from the routing process. Well, you could imagine trying to route something from California to Idaho, avoiding cities and towns with more than 50,000 people in population. It would be a disaster, and it would not be the safest, best route. I think that that is the threshold that we need to look towards: the safest, best route, and allow the National Government to determine that because you and I are not going to be able to determine that, and our municipalities are not going to be able to determine that.

So New York's positions are not unique. We in Connecticut are not arguing just a parochial position. We are arguing precedent and we are arguing the fact that if New York were ever to get the special waiver, you then open up an avalanche of further claims to be made by other municipalities from New York right to Idaho.

Mr. **Packard**. Thank you.

Mr. **Anderson**. Mr. Petri?

Mr. **Petri**. I just want to commend my colleague from Connecticut for his interest in this issue and his leadership on it. As just a basic question, does this apply to high-level and low-level nuclear waste from hospitals and doctors' offices and things, or are we worrying just about power plant fuel?

Mr. **Rowland** of Connecticut. I don't know off the top of my head. I know that in our particular case, we have dealt with the unspent nuclear fuel. I imagine that hospitals would have that same type of waste. I don't know how they handle it. Either way, I think you have to follow national standards, and I think that is the issue that we are debating at this point. I know that the waste that we deal with in Connecticut is specifically from utility companies, but I imagine that some hospitals would generate that same type of waste. Whether they ship directly out West or work through a specific contractor, I am not sure, but I think they would come under some of the same regulations.

Mr. **Anderson**. Mr. Applegate?

Mr. **Applegate**. No questions, Mr. Chairman.

Mr. **Anderson**. Mr. Boehlert?

Mr. **Boehlert**. No questions.

Mr. **Anderson**. Mr. Rowland?

Mr. **Rowland** of Georgia. No questions.

Mr. **Anderson**. Mr. Gallo?

Mr. **Gallo**. No questions.

Mr. **Anderson**. Thank you very much, Mr. Rowland.

Mr. **Rowland** of Connecticut. Thank you very much, Mr. Chairman.

Mr. **Anderson**. I missed Mr. Grant down there, didn't I?

Mr. **Grant**. No questions.

Mr. **Anderson**. Our next witness is the Honorable Cynthia Douglass, Administrator, Research and Special Programs Administration, United States Department of Transportation.

Cynthia, we do have your prepared statement in its entirety. You can read it, extemporize, any way you wish. I would like to have you introduce your colleagues.

TESTIMONY OF M. CYNTHIA DOUGLASS, ADMINISTRATOR, RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, ACCOMPANIED BY AL ROBERTS, DIRECTOR, OFFICE OF HAZARDOUS MATERIAL TRANSPORTATION, AND GEORGE TENLEY, CHIEF COUNSEL

Ms. DOUGLASS. Yes, I would like to introduce my colleagues who are with me. On my right is Al Roberts, who is the Director of the Office of Hazardous Materials Transportation in our agency, and to my left is George Tenley, who is the Chief Counsel of RSPA.

Mr. Chairman and members of the committee, I want to thank you very much for holding this hearing and I want to commend your leadership in introducing H.R. 4069 and in scheduling this hearing. This committee has long been interested in and supportive of the hazardous materials transportation program, and it is fitting that you are taking the lead in reviewing and amending the Hazardous Materials Transportation Act.

My only regret is that the late Chairman Howard, under whose leadership H.R. 4069 was introduced, will not be here to see this bill moved towards enactment. Mr. Howard was committed to assuring the safety of our transportation system, and I know that he would have been an advocate for positive improvements in hazardous materials transportation.

I have a brief oral statement to make and then I will respond to your questions. I have submitted my detailed statement for the record.

As the committee knows, the Hazardous Materials Transportation Act of 1974 has essentially operated for over 13 years without any major amendments. The act has generally worked well, but I believe that it is time to consider some important changes to assure that the program is meeting Federal and State goals in as practical a way as is possible.

Towards this end, the Department of Transportation has proposed legislation we believe necessary and beneficial. This legislation is certainly my top priority as the administrator of RSPA and one of the priority legislative initiatives of Secretary Burnley. I believe that this legislation, combined with continued congressional support for DOT's budget requests for this program, will enhance the safe and efficient transportation of hazardous materials.

The safety record for the transportation of hazardous materials in the United States is good. Last year, of the little over 6,000 reported incidents, there were 13 fatalities and 340 injuries. Despite the good safety record, some of the materials transported in the United States have the potential for creating a disaster. If you would just flip through our emergency response guidebook, the orange book in front of you, and look at the hazards of the chemicals transported and the recommended first response to chemical accidents, you will understand the concern of State and local officials with respect to assuring the safety of their citizens.

With this perspective in mind, I have made several important changes in the hazardous materials program since I have been at DOT. I came to RSPA 4 years ago, and at that time the hazardous materials transportation program was within the Materials Transportation Bureau, which also had responsibility for pipeline safety.

The budget for the program was $6.6 million, with a staff of 62. The bureau had a director who reported to the administrator of the agency.

From the beginning, I found this organizational framework to be terribly frustrating and unnecessary. I reorganized RSPA, creating an Office of Hazardous Materials Transportation with Al Roberts as the director. With that done, Al and I set out to improve the internal management of the program. We reviewed the staff, the budget process and programs. I asked Secretary Dole to direct her Safety Review Task Force to review our hazardous materials transportation program.

Since that time, we have increased the budget by 33 percent from $6.6 million in fiscal year 1984 to an administration request for $8.6 million in fiscal year 1989. We have increased the staff from 62 in fiscal year 1984 to an administration request for 91 staff in fiscal year 1989. We have set rulemaking priorities, reduced the regulatory backlog, and set up annual regional Federal-State meetings on hazardous materials and nuclear transportation. We have taken an active leadership role in the emergency response to transportation accidents. We have sought and participated in increased intermodal and interagency cooperation.

I think you will agree that these accomplishments and initiatives have improved and will improve our current safety programs. I think you will also agree that we are making great strides towards our primary objective: to protect the public from the risks inherent in the transportation of hazardous materials in commerce.

While these efforts are important and ongoing, I believe that it is also important to make some very basic changes in the Hazardous Materials Transportation Act. Our proposal, which is in H.R. 4069, will do the following to enhance the hazardous materials transportation program:

It prescribes specific areas of regulation that are exclusively Federal, for example, shipping papers, communication hazards—marking, labeling and placarding—and container and packaging standards. It will provide a statutory basis for the Department to determine the validity of State or political subdivision requirements which may conflict with the Hazardous Materials Transportation Act or the regulations, and replace the current advisory process which is provided by regulation.

The proposal recognizes concurrent jurisdiction in the States and their political subdivisions to adopt highway routes for the transportation of hazardous materials, with those routes being designated in accordance with national standards set by DOT. It provides for a dispute resolution mechanism for settling conflicts between or among States arising from routing decisions. It establishes a safety permitting program applicable to motor carriers of materials toxic by inhalation, class A and B explosives, and highway route controlled quantities of radioactive materials. It would also extend the hazardous materials regulations to intrastate operations.

That summarizes the major initiatives in the proposal. Now I would like to briefly address the emergency response issues. I know you will have more questions for me in all of these areas.

Our proposal does not address the emergency response funding issue, for a number of reasons. First, at the time of submission, which was about a year ago, there was not an adequate needs assessment that had been translated into dollars. There is still not an adequate needs assessment but we are all moving closer. Second, DOT is not the agency with the expertise, the budget, or the mandate to make such recommendations to Congress.

With respect to the first issue, there are several important efforts underway to develop the facts for a needs assessment. Title III of Superfund, which will be discussed by my colleagues from EPA and FEMA, requires the States to develop plans and conduct needs assessments for the response to chemical emergencies. A part of the States' needs assessment will be related to transportation emergency response.

DOT also has underway one external and one internal study. We have asked the International Association of Fire Chiefs to define an emergency response team and to estimate the costs of establishing and maintaining teams. In addition to that effort, RSPA is attempting to develop some estimates of first responder training for not only the State motor carrier enforcement personnel but also fire and emergency medical service personnel.

With respect to DOT's emergency response capabilities, there is statutory overlap in emergency response responsibilities between FEMA, EPA, OSHA and DOT. In order to not duplicate our efforts, DOT has attempted to clarify roles and to actively carry out what we perceive as our role. We developed a memorandum of understanding with FEMA, which I have with me and will be glad to submit for the record, under which FEMA has the primary responsibility for management of the emergency response issue.

This is consistent with the intent of Congress as recently expressed in the Superfund amendments. In that act, Congress gave FEMA $5 million to provide the States with grants for emergency response training and planning activities. DOT has a supportive role under the memorandum of understanding, and we have actively identified and addressed emergency response issues related to transportation. We will continue to do so.

I have discussed many of the positive RSPA emergency response initiatives in my detailed statement. These include publication of the emergency response guidebook, development of first responder training for State motor carrier enforcement personnel, studies on flow control, and the cosponsorship with FEMA of an information clearinghouse to provide States and local governments with information on hazardous materials emergency response publications, training, and much other useful information.

We believe that we have made headway towards effecting better interagency and Federal-State communication. We will be happy to work with the committee to the extent that we are able on this emergency response funding issue.

In summary, I believe that the DOT bill is a good, positive safety initiative. I am sure that many will recommend additions to the bill, and I intend to work with the committee to achieve an enactable bill this year.

Thanks.

Mr. **ANDERSON**. Thank you, Cynthia.

Four years ago, the Congress requested an evaluation of training programs for emergency response and asked for recommendations for funding such training programs. The report did not make a specific recommendation, nor does the bill submitted by the Department. Now you have told us why there is no recommendation on this important matter. Were there any discussions with FEMA or other agencies as to whether or not such a recommendation should have been included?

Ms. DOUGLASS. My recollection is that we made some recommendations in that regard. Also, in our memorandum of understanding FEMA and DOT agreed to work on a plan which would identify more of the actions that we believed needed to be taken with respect to this whole issue.

Mr. ANDERSON. How much do you spend on emergency response training and who do you train?

Ms. DOUGLASS. We do not train any firefighters or emergency medical personnel. We do not have any of our budget going toward training in that respect. We have developed additional curriculum for the State enforcement personnel, the highway patrol, with respect to first responder training for emergency response.

On emergency response activities generally, that includes developing programs and supporting these training initiatives, we are spending about $800,000 annually. In our 1989 budget we have about $800,000, not including the staff salaries and that sort of expense.

Mr. ANDERSON. Would you briefly describe your training program for emergency response and how you coordinate with other agencies responsible for training?

Ms. DOUGLASS. With respect to the motor carrier safety enforcement personnel, let me ask Al to describe the specifics of the training and how we provide that, and also how we coordinate primarily with FEMA.

Mr. ROBERTS. Most of our activities are coordinated through the National Response Team, which is made up of 14 Federal agencies. One of your later witnesses will describe that team in greater detail. We also coordinate our emergency response training activities with FEMA and with the State entities that we deal with in our cooperative hazardous materials program. We just recently completed a video training tape on basic awareness for police officers. We just started distribution of the training tape this past month, and we hope it will be well received.

Mr. ANDERSON. Mr. Packard?

Mr. PACKARD. Thank you, Mr. Chairman.

Ms. Douglass, both the NRC and the CHEMTREC response centers provide toll-free, 24-hour service to emergency service personnel, to prepare and respond to the hazardous material incidents. Do you believe these programs provide adequate guidance for those who are first-time respondents, having not been trained in the handling of hazardous materials?

Ms. DOUGLASS. First of all with respect to CHEMTREC, the National Response Center, and the other available data bases, we believe that we are certainly complying with the Hazardous Materials Transportation Act requirements. We are always trying to develop new ideas and we are always looking at new technologies as they come along, to try to improve upon first responder information.

As an example, we have worked with FEMA over the last two or three years to develop a computer-based hazardous materials information exchange system. We have put all of our information for training for emergency response, our publications, including our emergency response guidebook, and other kinds of information onto that system, and it can be accessed right now by any State or local government, industry, or the Congress through a telephone and PC combination. The States or local governments or the public can also get that information through a toll-free telephone call.

We are always seeking ways to improve upon the information we provide. At the same time, we do think we are carrying out the mandate of Congress under the Hazardous Materials Transportation Act.

Mr. PACKARD. How does CHEMTREC work?

Ms. DOUGLASS. CHEMTREC is funded, maintained, and run by the Chemical Manufacturers Association, and they have a telephone and a computer system and files on chemicals here in Washington, D.C. Let's say that there is an accident out on the highway. A highway patrolman responds. The highway patrolman gets information from the shipping papers on that truck, calls into the CHEMTREC and describes what is in that truck.

CHEMTREC will do two things: It will give the officer basic information, which is also available in our emergency response guidebook which we hope that every highway patrolman has in his automobile. CHEMTREC will also get in touch with the chemical company, the shipper, and put the officer in touch with the chemical company for more exact information on response.

We feel that this system is working very, very well, and the combination of the Emergency Response Guidebook, the first responder training, and CHEMTREC—that combination of tools is working very well.

Mr. PACKARD. So CHEMTREC can identify a hazardous material by simply having it described to them by, say, a first responder?

Ms. DOUGLASS. By the shipping papers and the UN number.

Mr. PACKARD. They can?

Ms. DOUGLASS. Yes.

Mr. PACKARD. Thank you very much.

That's all, Mr. Chairman.

Mr. ANDERSON. Mr. Applegate.

Mr. APPLEGATE. Thank you very much, Mr. Chairman.

Ms. Douglas, thank you very much for coming before the committee to discuss what we consider as a very important issue and a very important task. I think that we are all interested in it.

I think that, as you point out in your testimony, the 1974 Hazardous Materials Act has remained substantially unchanged since its adoption. To me, that says that we have a big task ahead of us, as the whole transportation and chemical industries have drastically changed since 1974. I am sure you are aware I have been actively pursuing some very strong changes in the 1974 law in order to bring the transportation of hazardous materials and waste back into the 20th century and try to return the control over this transportation back to the Federal, the State, and the local governments.

I realize that you are just as committed as I or anybody sitting on this panel to increasing safety, but of course our methods and our approaches are considerably different. While the administration maintains a status quo position, I have offered legislation which will eliminate a system of regulatory procedures which are ineffective and riddled with much abuse. With this in mind, I would just like to ask a couple of questions.

Ms. DOUGLASS. Sure.

Mr. APPLEGATE. You talked about the Department's emergency response guidebook as a source of information for first responders, and you pointed out that the Department issued an updated version in 1987. I think that is what we have here. Yet you failed to point out that even before publication of the book, the book was outdated, and that the first responders still must know what toxic chemicals that they are dealing with before the book can be of any use.

I am just questioning as to how the Department can justify the expense of preparing and distributing a document that is nothing more than a dictionary. Could you respond to that?

Ms. DOUGLASS. Yes. This book is a great book. First of all, I think it is fair to say that it is probably one of the very best emergency response guides that is in existence today. We fully coordinate preparation of this guide book with all sorts of people—the fire chiefs and all of the experts from the chemical industry and the railroads and the truckers. Now we——

Mr. APPLEGATE. Is it up-to-date?

Ms. DOUGLASS. Is it up-to-date? Yes, it is up-to-date. We just, in fact, republished it. We republish it every 3 years. We just completed our publication for 1987, and we have already distributed over 1 million copies of this guidebook in the last 5 months. We are ordering another 200,000 or 300,000 copies because we are running out.

It is a useful guidebook. If you will notice, on the yellow pages there are ID numbers, for example 1595. We require a truck carrying a quantity of dimethyl sulfate to have a placard on that truck that has an identification number, an ID number.

If that truck is involved in an incident, the police officer can look up 1595, the ID number. He is referred immediately to Guide 57. It says, health hazards, it is poisonous, may be fatal if inhaled. You can read for yourself the fire, and explosion characteristics, the emergency action, needed for spills or leaks, and first aid. This provides very basic first response.

The next thing a police officer should do—on every page of the guidebook is the CHEMTREC number—the officer should call and get in touch with CHEMTREC and get further information on how to respond. Sometimes you need to get experts for second response purposes to the field. Now second response——

Mr. APPLEGATE. Let me just ask you this, though.

Ms. DOUGLASS. OK.

Mr. APPLEGATE. If the placard is destroyed, though, you don't have access to the information, that you can go to this book.

Ms. DOUGLASS. Well, that would be true, but we require the placard on all four sides of the truck. Generally that has not been a problem. It is conceivable that it could be a problem. Let me——

Mr. APPLEGATE. How many compounds are in this book?

Ms. Douglass. I don't know how many compounds are in the book.

Mr. Roberts. The guidebook addresses all hazardous materials regulated by the Department of Transportation, including all hazardous wastes that are regulated under EPA manifesting requirements and all hazardous substances listed under section 311 of the Clean Water Act.

Mr. Applegate. But it is my understanding that there are about 500 or 600 new compounds that come on board every year.

Mr. Roberts. That is correct, and by the structure of our regulatory system, when a new material is produced and offered for transport in commerce, the burden is on the person offering the material for transportation to properly classify and describe the material on the shipping papers. There is no exception to that. There is not a preclearance system, and until such time as the material is singled out by name due to its peculiar characteristics, the material would be shipped under a generic shipping name such as "flammable liquid NOS" We currently have a rulemaking ongoing that proposes to require complete identification of material by chemical name following each generic entry.

Mr. Applegate. Well, let me ask you this: In talking about the placarding which you had mentioned, the office of technical assessment has stated that over 50 percent of the placarding on the trucks is incorrect anyway. What means of enforcement are available to local law enforcement officials in checking the contents of a truck if it is incorrect, short of stopping it and unloading it and taking everything out and looking inside to see what it is? I think that is what it really gets down to, too, doesn't it?

Ms. Douglass. Let me discuss that statement in the OTA report. I have talked to Edith Page—of OTA about this statement and I think she would, if she were here, agree with what I am about to say. That statement is somewhat misleading. When she says that 50 percent are improperly placarded, what she means is, that a placard may be upside down—one placard may be dirty, one placard may be missing. She doesn't mean that the truck is not properly identified.

At all of our meetings with State enforcement personnel, which we have every single year with all of the States, I have asked if this is a problem or if this has ever been a problem that anyone is aware of, in terms of identifying the load, and I have not had one person tell me that this has ever been a problem in identifying the load on the truck.

Mr. Applegate. Plus, it is easy to alter the placards.

Ms. Douglass. I beg your pardon?

Mr. Applegate. To alter the placards. I know than in Pittsburgh, officials there are a little bit perturbed because of the fact that they have three tunnels running in and out of Pittsburgh, and that the only way that they can get those trucks through is by altering the placards so that they can get through.

Ms. Douglass. Well, it is very simple to alter the placards. You just pull it out and put in another placard. That is a dishonest man or woman running that operation.

Mr. Applegate. Yes, but what way is there to check it? The system using CHEMTREC really is not a feasible mechanism to check that, is it, whereas if we had——

Ms. Douglass. If you have a dishonest person out there with respect to shipping papers and placards, you are going to have a problem, and I don't know of any system that is going to correct that.

Mr. Applegate. But there is no way to enforce the regulations, then, if there is no benchmark. I mean, how are you going to enforce it? I mean—you know.

Ms. Douglass. Al wants to answer that.

Mr. Roberts. Congressman, the placarding violation issue is one of the major enforcement emphasis areas of the Federal Highway Administration and has been for some years. Through the funding system for the States, I think you will find—as soon as they can get the systems together to collect all the data—that the placarding enforcement nationwide by not only Federal employees but by literally thousands of highway patrolmen will be one of the most vigorously enforced areas.

Ms. Douglass. In fact, a couple of years ago, something interesting came out of these Federal-State meetings that we sponsor. In discussing this whole enforcement issue and the placarding issue as well, it was interesting because the highway patrol believed that part of their problem was that the judges or the people that the highway patrol have to go to to actually enforce the regulations are not as supportive as they should be. An example would be of a trucker out in the middle of a rural area who is cited. He will pay the fine or whatever, and will say, "You know, a placard violation, that doesn't seem like a big deal. It's a $10 fine."

What we have done with the States is work on a judicial handbook to try to educate the people that are involved in enforcing the laws as to the seriousness of a placard violation. It may not sound at first blush like something serious, but it is, and that has been an effort that we have undertaken in the last few years, to try to improve that situation.

Mr. Applegate. I am concerned, too, about the comments with regard to CHEMTREC and the use of CHEMTREC. You know, I just don't see, from what I understand--what you have stated about CHEMTREC and what I understand about CHEMTREC—how they can be of real substantial value in providing the safety that we are looking for. I don't dispute the fact that it serves a useful purpose for the chemical manufacturers, but I certainly don't believe that it meets the mandate of the 1974 law. It is not a central reporting mechanism, and that is what the law calls for. What I want to know is, who do they report to and how many times have they reported accidents?

You know, what we are looking for is if you know what is in it, and you have to go to a telephone and pick up a telephone and call in, if you have the number available to you, and say, "This is what the placard says, and what is it that is on there? How do we cope with it?" If you have a central reporting system as called for and as I am proposing in my legislation, you know, you can punch it in. A fire truck can have this computer available. A police car can have it available. They could punch it in, and instead of waiting for

10 hours as they did in Miamisburg, they could wait no longer than maybe a minute and they could find out exactly what it is without causing fear to the whole area.

I know that, for instance, who is it that is in there first? Who is it that is confronted by the dangers of a spill, if not the firefighters? The firefighters say that they don't want to use CHEMTREC. They say it isn't a system that is worth the paper that it is written on. They want to be assured that there is a mechanism there which they can utilize to help the local community and to help themselves, of course. You know, CHEMTREC to me, it is a good dictionary of the chemical terminologies and all, but as far as being a practical agency for what it is that we want to do, it is nothing more than a telephone system if there is one available.

Ms. **Douglass**. Can I comment?

Mr. **Applegate**. Sure.

Ms. **Douglass**. First of all, we do believe that we are complying with the law. In 1984 there was an amendment to the Hazardous Materials Transportation Act to provide for the use of CHEMTREC, and in the report language that accompanied that amendment it says:

> Under that current law, DOT is required to establish and maintain a central reporting system and data center. Private industry, however, already maintains and operates a repository for information on chemicals and chemically related products. This facility is CHEMTREC, sponsored by the CMA. In order to make the most effective use of this capability, DOT and the Chemical Manufacturers Association entered into an agreement in March of 1980 which provides that the National Response Center which is maintained and operated by the Coast Guard and CHEMTREC will cooperate in collectively providing the system and data center required by current law. This section clarifies that this joint effort by DOT and private industry enables the Department to fulfill its statutory mandate without duplicating the effective efforts of CHEMTREC.

Now, with that said, again I will restate that as time goes on and as new innovations are developed we need to look at those different concepts and explore different ideas, and I will address that in just a second. But I think that one thing that is very important to understand at this point is that CHEMTREC and this guidebook are all aimed at first response, very basic first response. When you get to the second response or to the actual response in deciding what to do about an incident, you need to get experts in there, and experts may disagree.

There are many, many factors that need to be considered. Sometimes you have several different chemicals that you are dealing with. You don't just have one chemical. You have a combination of chemicals which result in a completely different chemical reaction. You have situations where it is raining, and water creates a problem for some of these chemicals. In certain situations you have fire. Fire is going to affect what the response should be. You have so many different factors that it really requires a very detailed and highly technical analysis by experts, and we have that system.

In fact, I think that the people in the NTSB and everyone that looked at the response in Miamisburg felt that it was really a very good response, and that appropriate action was taken and that the time frames were only long because it involved detailed analyses and discussions. Experts were on the scene within a half an hour or an hour, and within a couple of hours you probably had 100 experts who coordinated and met and decided how to respond.

Mr. **Roberts**. Quite a number.

Ms. **Douglass**. There are different ideas that are coming forward. One of the ideas is contained in your bill. I have a problem with the provisions in your bill because it would essentially cost $2.2 to—we don't know—$3 billion, not to the Government but to industry, to comply with the provisions in your bill. We think that this is just too expensive right now. The Congress may decide differently, and I will be glad to provide any information that is needed to evaluate this system.

There are other systems that are being developed, and I am very interested in those. There is a group that will be testifying today, or maybe they testified last week, on GEOSTAR/RAILSTAR that is a satellite-based system. The Department of Energy, as I understand it, has committed to using it for nuclear transportation, for the WIPP shipments. Under that system, there will be a little box that is in the cab of a truck. Information on the shipment will be put into that box that feeds back to a satellite, which feeds to a computer, and the information is there to track that shipment. You can have real time tracking of that shipment by satellite.

Mr. **Applegate**. Is there a cost to that program, too?

Ms. **Douglass**. Yes, there are costs. I have forgotten, and I am sure they will testify as to the costs, but it is not in the neighborhood of $2.2 billion.

Mr. **Applegate**. About a quarter of a billion.

Ms. **Douglass**. I don't think so. I don't know, but I will be glad to provide that for the record.

Mr. **Applegate**. Yes. Well, we are not sure. We can't be sure, either, that our system is going to cost that much, either.

Ms. **Douglass**. But Mr. Applegate, let me say that with respect to certain kinds of shipments, like the nuclear shipments, or with respect to MIC—that is the Bhopal, India type of chemical—or certain other chemicals that are transported, it may make sense from a cost-benefit standpoint to look at requiring the use of some of these systems, but to require them for every single shipment, 500,000 shipments a day, is just not cost beneficial. It is not a necessary expense or a necessary addition to the consumer costs.

Mr. **Applegate**. Well, it gets into the point that yes, maybe you don't think that every shipment, every 500,000 shipment should manifested and all, but at the same time we are still talking about the safety factor, and at any one of these where you could get a—and I will go back and talk about the Miamisburg thing. Had there been, as you say, a combination of chemicals or water combined with a chemical, nobody even knew at the time. We could have seen a Bhopal right there. Every one, every accident is a potential.

Sure, you may just say, "Oh, well, that isn't going to happen so we don't have to worry about it," but the problem is that too many times we wait until the horse is out of the barn before we decide to lock the door. If you think that $2 billion is an expense that may be excessive, you can think about what one Bhopal would do to $2 billion. It would be peanuts, so we are talking about trying to protect a lot of these small communities.

If people in the communities throughout the country knew what was running through their towns and villages, they would be horrified. So many times, that hazardous and toxic waste that is running through the countryside, and sometimes in milk tankers, sometimes they are disguised in other ways, and many times, most of the time, the people don't have any idea what is in those, wh is being taken through their communities. I have run into this o other projects that I have worked on.

Well, I know I am taking up a great deal of time, Mr. Chairman. You probably have some other people that want to ask some questions. I have a lot more questions that I would like to ask, and I will be submitting some of these questions to you, and I would certainly hope that you would answer them as strongly and as directly as you can.

Ms. Douglass. I will.

Mr. Applegate. Good.

Mr. Anderson. If there is no objection, the questions will be asked and I hope you will have them for the record. The record will be kept open for them.

Mr. Gallo?

Mr. Gallo. Thank you, Mr. Chairman.

I would like to also thank you, Ms. Douglass, for your testimony. My questions may not be as technical. The first question I have, and I have put it in legislative form in H.R. 4153, when reviewing the overall departments that have responsibility I was amazed to find that there were 14 departments with responsibility that in the case of an accident? Is there is no coordination with those agencies and departments in reporting to a central area?

Why has there not been an effort to coordinate the reporting system? That is the first question.

Ms. Douglass. I guess I may not be understanding or there may be some information that is not getting to you, but we do have within the Federal Government, the National Response Team, which is a group of 14 agencies that do meet fairly often, once a month, and coordinate all of our activities with respect to information and guidebooks. For example, on emergency response planning, we have jointly issued a guide on planning that has gone out to all the States and local governments to help with planning for emergency response. That has been signed off on by all 14 agencies.

RSPA is a member, as well as the Coast Guard, so DOT certainly has input into that National Response Team. It is chaired by the EPA, and I know Jim Makris will be talking about that today. In addition to that, we are getting ready to put the data bases that exist on our Hazardous Materials Information Exchange, and I think that that will be helpful. That system is a terrific idea. It is already up and working very well, and I think it has tremendous potential. We are also putting pending legislation on the system as well, so States can see what the legislation has been proposed in Congress. We are putting signficiant amount of information on that system.

Mr. Gallo. Do you have at this stage what you would classify as "hot spots," based on information that is available through those 14 different agencies that get reports on spills? Do you have the availability——

Ms. Douglass. What do you mean by "hot spots"? Do you mean an actual accident?

Mr. Gallo. Well, if you have accidents, is there a way of tracking through those 14 agencies, areas that may have had one spill or dangerous areas that have had more than one spill, areas that should be reviewed and maybe recommendations made in the transport schedule, meaning a transportation route that might be safer than others? Is there that kind of coordinated effort?

Ms. Douglass. Al?

Mr. Roberts. We have been operating a Hazardous Materials Incident Reporting System since 1970, Congressman. It requires a report, a written report, on any unintentional release of hazardous materials while transported in commerce, including storage during transportation. Our data base is approaching 200,000 reports.

Every time we say this, the press picks up on it and says there were 200,000 accidents. This could be a spill as small as a few ounces, which I don't think anyone would characterize as an accident, but from incident information there are a number of different studies that can be made.

We call it our Hazardous Materials Information System. It is used for analytical purposes, to determine trends, "hot spots," if you will, relative to the types of packaging that are the causing most failures or involved in most failures. As to the location of incidents, we can give you pretty good information on where the greatest number of incidents are occurring, by State or region. We find it a very useful tool. We are currently in the process of revising the system to upgrade its value.

Mr. Gallo. Is there any effort at coordinating with the requirements of the Superfund, which is the community right-to-know portion of it, knowing what is stored or manufactured in particular areas and following the transportation of that?

Mr. Roberts. Well, section 303 of title III requires, as part of that community planning process, identification of transportation routes used to transport extremely hazardous substances. All of the data base I just mentioned is intertwined with the master data base maintained for the agencies relative to spills and discharges of hazardous substances. We work on it with EPA, and the Coast Guard. The National Response Center data entry daily is put into a merged computer system through our Transportation Systems Center in Boston.

Mr. Gallo. Just one last, and then I know we have to go. Ms. Douglass, I don't know whether you have had an opportunity to review my piece of legislation.

Ms. Douglass. Is that the regional flow study?

Mr. Gallo. Correct. If you have any comments, I would appreciate it. I know we have to leave now, but maybe you could address those to me and the committee in writing, based on that particular piece of legislation.

Ms. Douglass. All right.

Mr. Gallo. And I recognize that as a first step, not an overall, comprehensive plan.

Ms. Douglass. All right. I will submit that in writing, but I would note that basically, I am supportive of flow studies, but the problem that we run into time and again is budgetary. It costs money to have people do these studies.

We have been working with the International Bridge, Turnpike and Tunnel Authority, which has been on using its own resources to survey the flow of hazardous materials. We have worked with them on the forms and the questions, and they will feed that information into our computer, and then we will make that information available to the States and to, of course, the International Bridge, Turnpike and Tunnel Authority.

We have also been talking with our hazardous materials enforcement officers in the States about how we could do something reasonable with respect to flow analyses. It is not very hard to do. You can go to the weigh stations and look at shipping papers, or you can just go out and look at the ID numbers and get the basic chemicals, but it takes time and it takes bodies and that costs money. That is part of the problem.

Mr. APPLEGATE. Would the gentleman yield just a second?

Mr. GALLO. Yes.

Mr. APPLEGATE. I would just say that my system—not my system, the system that my bill says—would provide that information within 30 days of the passage of that bill, and you would have all of the information that Mr. Gallo would need to implement his study—his flow study.

Ms. DOUGLASS. Yes.

Mr. APPLEGATE. We both agree. Good.

Mr. ANDERSON. We had better go vote. We have just a few minutes to vote. We will be coming back. We will recess for 15 minutes, and we will pick up the questions where they left off.

Ms. DOUGLASS. OK. Thank you.

Mr. ANDERSON. We will stand in recess for 15 minutes.

[Recess taken.]

Mr. ANDERSON. The meeting of the committee will come to order. I believe Mr. Gallo was questioning you but he is not back yet, so for the moment, Mr. Rowland.

Mr. ROWLAND OF GEORGIA. Thank you, Mr. Chairman, and thank you, Ms. Douglass, for being here today.

On the second page of your testimony you said that,

> While I understand the States' involvement and in some cases believe it enhances safety, I can also testify to the fact that it often creates confusion and unintentionally negatively affects safety.

Ms. DOUGLASS. Yes.

Mr. ROWLAND OF GEORGIA. I would like for you to expand on that a little bit. Is there difficulty with cooperation between the State and Federal Government, and how about the local communities? I know that I have heard from the fire chief in my home town, who is in charge of emergency services there, that he has concern on occasion of not knowing when something hazardous is coming through, and that poses a real problem for him. Just tell me a little bit about local communities and the State and Federal Government, the relationship there and how it does not work as well as perhaps it ought to.

Ms. DOUGLASS. The statement that I made regarding the negative impact on safety, let me explain that first.

When you have 50 different States and you have over 20,000 communities, if you didn't have any Federal standards and you just let every State and every local community decide what it wanted to do—the problem is, major transportation will be going on in the United States without any consistency. If you have some consistency, then the companies can make absolutely certain that their trucks are meeting one set of standards. They can make sure that they are complying with the safety standards, and there is not as much confusion.

If you have the confusion of trying to deal with 50 different laws or 20,000 different laws, then you have a breakdown and you may not be able to keep track of what is going on and what standards you are meeting and whether you are meeting the right standards. I think that the confusion can create a safety problem, so I think that there is a balance between a national uniformity which enhances safety, and then at the same time there has to be some room for State and local involvement.

We have approached this in several different ways in our legislation. First of all, in certain areas we feel that there has to be Federal preemption to ensure uniformity. We have specified those areas in the bill, I have talked with State and local representatives and I really have not heard of anybody that disagrees with our language regarding the uniformity provisions. I am not saying that I have talked to all 20,000 mayors and all the fire chiefs in the United States, but I have talked to a lot of local representatives and State representatives, and I don't know of anybody that disagrees with the language clarifying the Federal role and the State role.

In addition to that, since I have been at RSPA we have made a significant effort and put money and staff and time into creating a solid Federal-State relationship in terms of communication. We have meetings once a year on a regional basis, and we meet with all of the States through this process. We call it the COHMED—Cooperative Hazardous Materials Enforcement Development—program.

We also meet with the Commercial Vehicle Safety Alliance, which is an alliance of all the State highway patrols In these meetings, which last in each region about a week, we discuss all of our regulations, our interpretations, and our enforcement problems. We discuss training that exists at the Transportation Safety Institute. We talk about new information that is available. We discuss inspection techniques, and emergency response. We discuss the widest range of Federal-State issues with respect to hazardous materials transportation.

In addition to that, we also have the same setup with respect to nuclear transportation. We get together on a regional basis with the State nuclear people. The Department of Energy also participates in the Nuclear Regulatory Commission and FEMA. We try to bring all of the appropriate Federal agencies together to discuss with the States our regulations, their regulations, what we can do, what they can do, where we can work together, and we try to coordinate.

So I think our legislation, combined with a continued strong Federal-State relationship, is important. If you will note, I have tried to take a balanced approach. I don't believe that total Federal preemption is necessary. There may be some that disagree with that approach, but I don't believe that that is necessary or, frankly, appropriate.

Mr. **Rowland** of Georgia. Well, the fact is then that you are working with the States, based on what you just said. I was concerned about your statement, saying that you can testify that State involvement can at times create confusion and affect safety, but that really is not the case then, is it? You don't have any instances of where that took place, and the States do agree that there ought to be uniformity, and there is uniformity on the Federal level, so——

Ms. **Douglass**. We do have some problems in this regard.

Mr. **Rowland** of Georgia. Well, tell me. That is what I am asking. Tell me, what is the problem? That is what I want to know.

Ms. **Douglass**. We have an example where a city adopted cargo packaging requirements for its cargo tanks, and the Department had previously stated through advisory opinions that these kinds of requirements are inconsistent with the Federal scheme of regulation and thus are preempted under the law. Nonetheless, the community decided that it wanted to have different cargo containment rules, and it adopted——

Mr. **Rowland** of Georgia. Let me interrupt you there. Are you saying that a city can preempt the Federal Government in what they want to do?

Ms. **Douglass**. No, I am saying the opposite, that the Federal Government said, "We found these rules to be inconsistent. In an advisory capacity, we said that we felt that these were inconsistent." We have had to say that time and time again, and then the next thing that happens, if the city doesn't like our decision or if the industry doesn't like our decision, they go to court and the courts determine on their own whether or not the city law is consistent or inconsistent with the Federal regulations.

Mr. **Rowland** of Georgia. Goes to what court?

Ms. **Douglass**. It is very confusing, sir.

Mr. **Rowland** of Georgia. Yes. What court do they go to, Federal court or a State court?

Ms. **Douglass**. George Tenley, our chief counsel, says both Federal and State, so you have the courts deciding really what is consistent and what is inconsistent.

Mr. **Rowland** of Georgia. And there are actually decisions where the courts have decided that those decisions by cities supercede what the Federal requirements are? Is that what happens?

Mr. **Tenley**. No, they haven't found that, Mr. Congressman. Either they upheld the Federal regulation over the local regulation, or they held that the local regulation was not inconsistent with Federal law and therefore could stay in operation. That is how the rulings have come down.

Mr. **Rowland** of Georgia. I must say I am not altogether clear on just what has taken place.

Mr. **Tenley**. Well, I will give you an example. I think you posed the first question, "Give us an example of the safety problem." One jurisdiction or one State or local government may adopt a requirement, let's say for prenotification of shipments, which in its operation may cause trucks to back up in an adjoining State. The adjoining State had nothing to do with that decision, and now it has hazardous materials trucks backed up on its interstate, its pull-offs, what have you, waiting for the operation of another State's requirement. That could be an unsafe condition. That is something we have looked at in the past, and on occasion have given advisory opinions that that was inconsistent and preempted.

The bigger problem, I think, is that it is not so much the relationship between the States and the Federal Government. It is often the relationship of the local governments to their States. As the Administrator mentioned, we have over 20,000 jurisdictions adopting requirements with very little oversight by States, and it is usually left up to the Federal Government, through the Department of Transportation or through the judicial system, to make that reconciliation. That is one of the problems.

Mr. ROWLAND of Georgia. As I understood your initial statement, you are working to resolve those kinds of difficulties.

Mr. TENLEY. We believe the bill provides a mechanism for resolving that.

Mr. ROWLAND of Georgia. Let me ask you the last question that I asked a few moments ago, about notification of local communities when hazardous material is going to move through that community. Can you tell me a little bit about that?

Ms. DOUGLASS. Yes. There are different types of notification concepts out there, for example, on spent nuclear fuel to notify the State before the spent fuel is coming through is a requirement we can be supportive of.

Now let's take the other extreme. Let's say a city wants to be notified 24 hours in advance of all hazardous materials that are moving through. That sets up an incredibly chaotic and, to my mind, impossible situation. I don't think most cities want that information. What would they do with it? They would get voluminous information and I am not sure what they would do with it.

Between those two extremes I think that there are some things that could be done with respect to notification, that the Department of Transportation can be supportive of. On the other hand, we can't be supportive of a requirement that is going to create a chaotic situation and doesn't have a safety benefit. Prenotification is not one of the areas that would be preempted in our legislation.

Mr. ROWLAND of Georgia. Are you saying essentially there is no way that you can really notify local communities along the route of transportation of hazardous materials, about those materials coming through? Is that essentially what you are saying?

Ms. DOUGLASS. I am a little confused. Could you state that again?

Mr. ROWLAND of Georgia. Yes. What you are saying is that it would be difficult or create chaos in trying to notify those communities along the route of transport of hazardous material, that that hazardous material is coming through their communities?

Ms. DOUGLASS. Yes. I am saying that if a city law would require a trucking company to notify——

Mr. ROWLAND of Georgia. Well, let me just give you an example. Macon, GA, is a city with a rail line, on two interstates. Suppose some hazardous material is going to move through on the railroad from someplace in the country to a disposal site. Are you saying that it is not going to be practical to notify the officials there that that material is going to be coming through?

Ms. **Douglass**. Let me ask Al on the rail issue. I am not as familiar with that.

Mr. **Rowland** of Georgia. Well, I am not particularly talking about rail. I used that as an example. Interstate or whatever.

Mr. **Roberts**. I think if you just do some quick math, Congressman, you might understand how we perceive this problem. Obviously you can carve out certain materials such as toxic gases or any special category of materials, however we are dealing with a tremendous volume of materials. Numbers have been used in the range of 500,000 shipments per day.

Ms. **Douglass**. Gasoline is an example.

Mr. **Roberts**. There are 100,000 loads a day of gasoline and petroleum products. Then you multiply this by every community, every jurisdiction—borough, town, county, city—that the material would move through, and start doing some multiplication, and you can come up with some astronomical numbers in terms of what the necessary communications would be.

The other thing is really, at the other end of it, what the benefit is going to be from the prenotification and what the people are going to do with the information. For example, my most recent understanding is that the State of Georgia has prenotification requirements for radioactive materials, polychlorinated biphenyls, and liquified natural gas. About a year ago I talked with the people who are operating that program, and they did not speak strongly of the benefits coming to them relative to receiving these notifications, when and if they receive them.

So prenotification requires an intensive amount of study as to the benefits that the community would have, to offset this concern about not knowing what hazardous materials are moving through their community. I think this is basically the way we have to respond to the question.

Mr. **Rowland** of Georgia. Well, you have answered my question. That is what I wanted to know. You know, I didn't mean to try to put you in a defensive position. I just wanted to know what the situation was, and you have answered the question, and I appreciate that.

Thank you, Mr. Chairman.

Mr. **Anderson**. Mr. Clement?

Mr. **Clement**. Yes, sir, Mr. Chairman. Thank you.

Ms. Douglass, there was a hazardous material spill aboard an American Airlines flight between Dallas and Nashville last February. The aircraft received minor fire damage in the middle cargo compartment when some hazardous material spilled from its fiberboard container. The flight had 119 passengers, and fortunately there were very few minor injuries resulting from inhalation of some of the noxious fumes and injuries sustained in the emergency evacuation of the aircraft.

I am told that a similar incident involving lacquer recently occurred aboard an American Airlines flight over Sacramento. Ms. Douglass, I am told that between 1980 and 1988 there were nearly 1,100 incidents involving hazardous materials in aircraft or airline operations. While the data do not show that all occurred aboard airplanes, the number should suggest that enough is not being done to identify hazardous materials and the potentially devastating consequence of a spill or fire in the aircraft's cargo compartment.

I am told that many cargo compartments aboard aircraft in use today do not have heat sensors nor smoke detectors. The FAA had a notice of proposed rulemaking several years ago to require such detectors in cargo compartments, but the rule never went into effect.

Ms. Douglass, the question I want to ask is, when is the Department or the FAA going to revisit the issue of hazardous materials aboard aircraft and the types of detectors that are necessary to alert the crew to the nature of the problem in the hole?

Ms. **Douglass**. Let me ask Al Roberts, who is the Director of the Office of Hazardous Materials Transportation, to respond to that. He is familiar with that American Airlines incident, and exactly where our rulemakings are with respect to the FAA.

Mr. **Clement**. That will be fine.

Mr. **Roberts**. We are very familiar with the accident in Nashville, Congressman, that you mentioned. I should first point out that there was total nondisclosure of the presence of that hazardous material in that shipment on the part of the shipper. In other words, there was no indication hazardous materials were present nor any indication that they had knowledge of the regulations, so we are starting from a zero base in terms of somebody offering a hazardous material for transportation in total noncompliance with the regulations. That is an enforcement issue, and I can assure you the FAA is taking a very strong enforcement posture relative to that particular shipment.

Concerning the cargo compartments, we didn't anticipate this question today but we have been actively discussing this matter with the FAA recently. We are hoping, based on scheduling of other activities, to enter into a rulemaking development project on this topic with the FAA in the not too distant future. It is an issue—we don't deny that in any fashion—that needs to be addressed. We have an outstanding rulemaking that is associated with this issue in terms of the aggregate quantity of hazardous materials permitted in any inaccessible cargo pit or bin aboard an aircraft.

The United States is presently the only country in the world, to my knowledge, that holds that limit to a maximum of 50 pounds of hazardous material. ICAO in the International Civil Aviation standards allows unlimited volumes of these materials in cargo pits per aircraft, if it is of a kind and quantity per package allowed to be on a passenger aircraft in the first place, and there have been strong pressures brought that we should join ICAO by removing the quantity limit, so there are a number of issues there that we are just beginning to look into relative to carriage on board aircraft.

Mr. **Clement**. You mentioned in the very near future. How serious do you view the problems associated with shipping hazardous materials aboard aircraft?

Mr. **Roberts**. A number of years ago one of the principal stimuli for the Hazardous Materials Transportation Act was one serious accident that we have had with these materials, and that was in

1973. We view it as a very important issue. I might point out that the FAA aviation security program has cross-trained a lot of their aviation security personnel in hazardous materials. I have personally visited air cargo facilities with them and my impression, based on my experience and knowledge of this particular aspect of hazardous materials transportation over 10 years ago, is that it has vastly improved in terms of the level of compliance we found on the part of shippers over 10 years ago.

Ms. DOUGLASS. I think that you make an excellent point, and we will get back to you with some dates and some time frames on this.

Mr. CLEMENT. OK. I would like that very much.

The shipment aboard the Dallas to Nashville flight was not marked as to its contents, as was mentioned. Should there be some protocol or series of questions asked shippers so that hazardous materials can be readily identified? If so, what has the Department done to implement such a suggestion?

Mr. ROBERTS. The negative declaration issue has been with us for a number of years. There is a requirement of a written certification in the aviation industry. There is a standardized format with a special border around the document to identify hazardous cargo. The aviation industry itself has implemented a plan of negative declaration on a green-bordered document to indicate that the material is not a hazardous cargo when somebody may suspect that it is. From a departmental standpoint, Paperwork Reduction Act constraints and things of that type, we have not considered such a requirement for implementation by rule.

Mr. APPLEGATE. If the gentleman would yield——

Mr. CLEMENT. Yes.

Mr. APPLEGATE [continuing]. I would just like to say that under my bill, again, there would be no suspicions. You would have access to the contents of the hazardous materials, whatever they may be, instantaneously.

Mr. CLEMENT. Thank you for mentioning that.

The spill aboard the Dallas to Nashville flight occurred in a class D cargo compartment, which I understand means that it is designed so there is no air flow through it. It is designed to not sustain combustion. Unfortunately, the material which spilled was an oxidizer, so that even though there was no oxygen being fed to the fire from the airplane, it nonetheless manufactured its own oxygen during combustion. Is it correct that there are no warning indicators for the class D cargo compartment, particularly heat or smoke sensors?

Mr. ROBERTS. We will have to provide that answer for you for the record, Congressman. I don't think we should sit here and claim expertise on cargo compartments to any great detail.

Mr. CLEMENT. All right. I understand that a number of air carriers are ordering what are called combi units, which combine both passenger and cargo units within the body of what is normally just the passenger compartment. We recently saw the destruction of a South African combi unit with the loss of all aboard. It is suspected that an on-board fire erupted. What steps are underway to protect both the crew and passengers from a fire which erupts in the cargo section of a combi configured aircraft?

Mr. ROBERTS. I am familiar with the accident in Africa. I have been awaiting more information. Apparently you have more than I have, Congressman. I have no specific knowledge about the causal factors in that accident. There were a number of suspicions.

The combi aircraft issue has to do with some definitional problems relative to the meaning of access, and it also has to do with the issue of where the freight compartment is on the deck of the aircraft, whether it is up front or in the rear. This is part of the same project that I mentioned to you earlier, that we were entering into with the FAA to try and sort these issues out, and that is part of the same problem.

Mr. CLEMENT. I guess the EPA witness might want to comment on this.

When the public thinks of hazardous materials, we generally think of caustic chemicals, radioactive materials, and a whole range of other materials usually used in commercial businesses. We generally fail to associate the many household chemicals found in our homes as hazardous, and we usually overlook such things as compressed gas containers and lighter fluids used in camping and recreational activities. All of these common, everyday items are often shipped, particularly aboard aircraft. What would you suggest we do to alert the public to the hazards of transporting or shipping these household or recreational items?

Mr. ROBERTS. If you travel into an airport, where people check in or check their baggage, one of RSPA's regulations require that there be a sign posted warning the traveling public about hazardous materials in their luggage. We specify the language for that sign.

Now under the regulations the traveling public are allowed to carry up to 75 fluid ounces of materials such as toilet preparations, cosmetics, drugs, and medicines. This would also include such things as shaving cream and things like that. Hazardous materials beyond that limit are forbidden in luggage. There are other things that are totally forbidden in luggage, such as matches. We do not allow matches to be in checked baggage.

There is a very elaborate system of regulation—I am not claiming it is perfect—that pertains to the traveling public and what they are allowed to carry in their luggage aboard aircraft. We have standards for cigarette lighters. We have standards for aerosol packagings in terms of their packaging performance. It is a rather complex system to explain in a few words, but there is a provision in the regulations that goes to what is allowed to be carried in the passenger compartment of an aircraft. Generally, hazardous materials are forbidden in a passenger compartment, except certain consumer items.

Mr. CLEMENT. In this morning's mail there is a "Dear Colleague" letter from one of our colleagues concerning the U.S. Army proposal to send germ warfare toxins through the U.S. mails to the Biological Warfare Center at Dugway, Utah. Were any of you involved in the consideration of this proposal?

Mr. ROBERTS. Not directly. What you are quoting from has received a lot of publicity in recent weeks, was an environmental impact statement prepared by the Army for the Dugway Proving Ground. The Army has not shipped any etiologic agents by mail out of the Dugway Proving Ground during the last 10 years. A lot of concern was expressed about this, and we checked it out to find out what the facts are. Based on the information we have, it is not going on, and even though it was discussed as an optional way of moving very minute quantities in the future, there is no specific plan to do so.

Mr. **Clement**. What problems do you see if the Army is allowed to send germ toxins through the mails? I would suggest that many other hazardous materials are sent through the mails, and I understand that the Postal Service has some regulations concerning them, but what about toxins?

Mr. **Roberts**. Toxins?

Mr. **Clement**. Yes. What problems——

Mr. **Roberts**. The term that Congress gave us many years ago was "etiologic agents." The contemporary term is "infectious substances." We have worldwide standards in place through the United Nations that have been adopted by the International Civil Aviation Organization. They are in the process of being adopted I believe, by the International Maritime Organization. Our regulations were issued on this topic in the early 1970's and we currently have another rulemaking project under development to contemporize our requirements.

The basic system we operate in the United States is based on determinations made by the Centers for Disease Control in Atlanta, GA. We do not claim the expertise on all the different infectious substances and microorganisms, pathogens. Therefore, we must place heavy reliance on the CDC to assist us in carrying out our transportation responsibilities.

Mr. **Clement**. Is it currently illegal to send radioactive materials through the mail?

Mr. **Roberts**. As mailable matter? I believe that to be the case, except very low level radioactive materials such as you would find in smoke detectors and wristwatches and things like that.

Mr. **Clement**. Thank you, Mr. Chairman.

Mr. **Anderson**. Mr. Hastert?

Mr. **Hastert**. Thank you, Mr. Chairman.

I have another area that I would like to question you on in this area. You proposed in your rulemaking performance-oriented packaging standards, but you changed the classification of anhydrous ammonia from a nonflammable gas to a poison gas. Many farmers in my district and the refrigerator industry believe they would be adversely affected by this change. Why do you believe emergency response capabilities will be improved with a changed label? Isn't the safety record of anhydrous ammonia very good? Won't the change adversely affect the ability of users to transport or obtain insurance?

Ms. **Douglass**. Let me generally comment, and then Al might be able to more specifically comment.

We have a proposal out under H.M. 181, and the comment period on that proposal is closing today, in fact. We will be evaluating all of the comments we receive with respect to that proposal and making decisions as to whether or not it actually does improve the safety. We will be looking at the costs and the benefits and at all of the various issues that have been raised, including the insurance issues. We don't know at this point exactly where we are going with that. That is the purpose of the proposal.

Mr. HASTERT. You don't know where you are going with that?

Ms. DOUGLASS. No, we don't know how we are going to decide that issue. The purpose of a proposal, is to put it out and let the public comment.

Mr. HASTERT. Well, why in the world did you bring it up in the first place?

Ms. DOUGLASS. The reason for the proposal was twofold: one, to make improvements in the safety regulations; and second, to align our standards with the international standards. That is the broad purpose of our H.M. 181 proposal. It is a very broad proposal. It was about 1,400 pages. It cost about $100,000 to publish that in the Federal Register, and it is probably one of the most significant rulemakings we have ever issued.

But the specifics on anhydrous ammonia, the rationale behind that specific proposal, let me ask Al to expound on that. We don't know exactly what we are going to do. That is the purpose of the proposal and the request for comments. In fact, we are prohibited by law from saying what we are going to do because we are not supposed to prejudge an issue.

Mr. HASTERT. Are you passing the ball off? Go ahead.

Mr. ROBERTS. Well, first of all I want to mention that in the rulemaking we did not single out ammonia. Ammonia is one of 70 gases we addressed, and we did it by criteria, the toxic level of a given material, and applied it to a graph or a chart. We call it a nomograph. This is consistent with the classification criteria that are being used on a contemporary basis throughout the world.

Looking at the data on materials, including liquids such as methyl-i-silcyanate and many other commercial chemicals and gases, in terms of their lethal concentrations, we put a dot on the graph and if the material fell in a certain zone on the graph, we classified it accordingly. We didn't——

Mr. HASTERT. Did you ever talk to the Department of Agriculture? Do you guys ever talk with each other?

Mr. ROBERTS. On this particular rulemaking?

Mr. HASTERT. Yes.

Mr. ROBERTS. No, sir, we did not.

Mr. HASTERT. You said, "Yes, sir, we did not?"

Mr. ROBERTS. No, we did not.

Mr. HASTERT. Let me just tell you, from somebody who gets this on the last day of comment, let me give you my comment.

Mr. ROBERTS. I'll have to put it in the public docket.

Mr. HASTERT. Well, it will be someplace. [Laughter.]

I represent an area that is mixed, urban/suburban, and 130 miles of corn fields and bean fields in the center of Illinois. We probably have literally thousands of vehicles that carry anhydrous ammonia. Every farmer treats every acre of that 130 miles, north and south in central Illinois, north central Illinois, with anhydrous ammonia.

What you do in your rulemaking basically hamstrings agriculture completely. It ties them down. Something that has never had a negative effect, never been detrimental to the health and safety of the communities in that area, and you come up and pull something out of the clear blue air that literally hamstrings agriculture, I don't understand it.

I can't understand how you can put things together, start to put a rulemaking together, and not have any cross reference to other agencies in the Federal Government. If we are going to make this country work, we have to work together. You people sit there and bring down reams and reams and reams of rules that you pull out of thin air, and never check with anybody else about how things work.

Ms. **Douglass**. That is not true.

Mr. **Hastert**. You know, I am appalled. Of course, the letters that I get out of my constituency day in and day out, that people have to work and have to make a living and have to make crops grow, and we have some bureaucrats sitting here in Washington and trying to think up rules to hamstring productivity and ability to compete and ability to make this country work, I am appalled.

Mr. **Roberts**. Congressman, just one point. I wouldn't characterize what we do as "guesswork." We have had fatal accidents involving the inhalation of ammonia vapors in transportation accidents. We probably should have written more on this topic in the preamble, but that has not been normally our style. There have been fatal accidents involving the transportation of ammonia, and we will gladly supply you that information if you so desire.

Mr. **Hastert**. Well, have we ever had any accidents with the transportation of gasoline?

Mr. **Roberts**. Yes, sir, and we have——

Mr. **Hastert**. How about feed?

Mr. **Roberts**. Sir?

Mr. **Hastert**. Well, feed, you know, another agricultural product, feed.

Mr. **Roberts**. Feed?

Mr. **Hastert**. Yes, proteins, things like that.

Mr. **Roberts**. I don't believe we regulate those. That has not——

Mr. **Hastert**. Cottonseed meal? Have we ever had any accidents with cottonseed meal?

Mr. **Roberts**. We have had some incidents involving cottonseed meal.

Mr. **Hastert**. Are we going to write rules on all of those?

Mr. **Roberts**. We have regulations on cottonseed meal.

Mr. **Hastert**. I am sure you will.

Mr. **Roberts**. For spontaneous combustion, yes, sir.

Mr. **Hastert**. No further questions, Mr. Chairman.

Mr. **Anderson**. Mr. Gray?

Mr. **Gray**. Well, thank you, Mr. Chairman.

Mr. Chairman, I first want to thank you for holding these hearings. This is a very important subject, and although I have been presiding over the House every day this week and haven't been able to attend like I would like, I can assure you that the almost 12 million people in Illinois are very much interested in this subject.

Mr. **Anderson**. We sure missed you.

Mr. **Gray**. Yes, I noticed that. That's why you called me to come over. [Laughter.]

But seriously, Mr. Chairman, the 12 million people in Illinois are very, very much interested in this subject of transporting hazardous materials. We have over 1,700 miles of interstate highways in Illinois. We have thousands of miles of rail lines and, as you can see from that map up there, being an elongated State we are subject to the transportation of hazardous materials on a daily basis.

What I would like to ask any one of the panel is if you have any percentages on what percentage of hazardous materials is nuclear waste, transportation of nuclear waste, spent nuclear waste from our nuclear power plants?

Ms. DOUGLASS. A fraction of a percent. There are not very many shipments of nuclear high-level spent fuel taking place right now in the United States. That will go up as the——

Mr. GRAY. I'm sorry. I was distracted there momentarily. What percentage did you say?

Ms. DOUGLASS. It is a fraction of a percent. It is a very small number of shipments that are taking place right now.

Mr. GRAY. But don't you anticipate that percentage will increase, though, as the nuclear waste is spent during the generation of electricity?

Ms. DOUGLASS. Yes, it will increase as several different events occur. We are getting ready in probably 1990 for the WIP shipments. That will increase the number of shipments, and we also are looking at, longer term, the permanent depository site. It will continue to be just a small percentage of the hazardous materials that are transported, but right now it is very small. I am told it is 100 shipments a year out of 500,000 shipments a day.

Mr. GRAY. The reason I bring up that subject, there seems to be more fear about that particular item than anything else, as far as the press is concerned, as far as people writing to me in my district, because it does pass through either on the rail or by truck. You say it is only 1 percent of the total hazardous material?

Ms. DOUGLASS. It is a fraction of a percent. It is about 100 shipments a year right now.

Mr. GRAY. What do you consider to be the most hazardous materials that are now being transported, either by truck or rail?

Ms. DOUGLASS. Well, I think it depends on how you look at the words "most hazardous." Some people might say that nuclear material is the most hazardous. Other people might say——

Mr. GRAY. Well, from a statistical standpoint of fatalities.

Ms. DOUGLASS. From the standpoint of fatalities, gasoline is the No. 1 problem. From the standpoint of the potential for disaster, personally I think that liquids toxic by inhalation have the potential to be the most hazardous.

Mr. GRAY. How are most of these going, by rail or by truck?

Ms. DOUGLASS. Both.

Mr. GRAY. Both, so you wouldn't come down on one side or the other, on a percentage? I am talking about the most hazardous materials, whether they are going by truck or by rail.

Ms. DOUGLASS. Well, gasoline by truck, and our fatalities in the hazardous materials incidents over the last 5 or even 10 years have almost entirely been related to gasoline and to trucks.

Mr. GRAY. We have had several rail accidents in Illinois where we have had to evacuate entire communities.

Ms. DOUGLASS. Yes.

Mr. Gray. That's the reason I was trying to get on the record about the worst materials to be on the alert for.

Ms. Douglass. You haven't had very many fatalities. In fact, in the last few years you have not had any fatalities with respect to rail incidents, but you have had evacuations and you have had concern. That is the reason for the evacuations. If you look purely at statistics, which we don't do for the very reason you have just cited, gasoline trucks are the biggest problem; but if you look at the potential for concern, then you move into the other areas and other materials and modes.

Mr. Gray. Have you read the gentleman from Ohio's proposed legislation, of which I am happy to say I am a cosponsor?

Ms. Douglass. Yes.

Mr. Gray. Have you taken an official position for the Department of Transportation on that particular bill?

Ms. Douglass. We are opposed to that bill. However, we are very supportive of looking at the general concept of improving communications as technology is developed. I was discussing some of those different options earlier. Our main problem with the Congressman's bill is the cost. It is so expensive. It would cost, at a minimum, $2.2 to $2.5 billion, and that doesn't include the long distance charges over the telephone. It doesn't include a lot of things, and we think that the actual cost could be substantially more than that.

Mr. Gray. So your main opposition is one of money and not substance, on the necessity of the bill. Is that it?

Ms. Douglass. We don't believe that it is necessary. We don't think the benefits are there to justify the costs of that legislation, but we are not opposed in any way, shape or form to improved communication with States. We are not at all opposed to improving the amount of information that we have or data that we have. No, we are not opposed to that.

Mr. Gray. I love lively discussion, so I yield to my friend from Ohio.

Mr. Applegate. Thank you.

Well, of all of the agencies who are involved in all of this and all the cost factors, what is the total cost involved in the development of a system? Of all of the agencies that are involved in hazardous waste transportation and all that is involved, what kind of a cost is there? How many agencies are involved? You have DOT, you have yours, you have FEMA. What kind of a cost are we talking about, and a cost, incidentally, to the taxpayers?

Ms. Douglass. Yes.

Mr. Roberts. FEMA is not a regulatory agency in the field of hazardous materials transportation.

Mr. Applegate. But how much of a cost are we talking about?

Ms. Douglass. We can figure that up for you. I don't have the costs of EPA's data collection or—you want the costs of the present Federal systems for emergency response purposes? Is that it?

Mr. Applegate. Yes. Yes, I would say that, because you keep talking about the fact that your basic objection to my bill is——

Mr. Gray. The cost.

Mr. **Applegate** [continuing]. Is the cost factor, and setting aside the safety features of that bill and what it could ultimately mean to the safety of people and communities.

Mr. **Gray**. Reclaiming my time, I would say to my distinguished friend from Ohio, probably if we had this type of reporting system, a little better handle on the subject, insurance rates probably would go down by that amount of money, so we are really not costing more money for the general public. I am sure the lady knows that liability insurance rates now have just skyrocketed. We have had testimony here. The distinguished chairman of the subcommittee and full committee, Mr. Anderson, has held hearings on all phases of transportation, and some liability insurance has gone up 1,000 percent in 2 years, particularly on trucks. I am sure this is one of the areas, hauling hazardous wastes in which the liability policies probably have increased tremendously over the last few years, so I was wondering if you considered that in your equation of the $2 billion cost for Mr. Applegate's bill.

Ms. **Douglass**. I guess I don't understand. It is not going to prevent accidents from occurring. It is just going to provide some good information.

Mr. **Gray**. Well, I know, but that's why we put up street lights on the corner, to tell the other people that are coming in the opposite direction that they have either got to stop or it is safe to go ahead, and if you notify people——

Ms. **Douglass**. Street lights help prevent accidents.

Mr. **Gray**. Pardon me?

Ms. **Douglass**. Street lights help prevent accidents, and——

Mr. **Gray**. Well, so will notifying people when someone is moving through a community with hazardous material. You don't feel that notifying them, or having a handle on where these shipments are going and when they are leaving and when they are going to complete their run is valuable information.

Ms. **Douglass**. I don't believe that the provisions in Mr. Applegate's bill will do that. I don't believe that it will prevent accidents from occurring.

Mr. **Gray**. Well, I thought it was a reporting bill, to require everybody to report when they are moving hazardous materials so people could be forewarned. Isn't that what it does, I would say to the gentleman from Ohio?

Ms. **Douglass**. With respect to prenotification on all hazardous materials, we have done analyses and studies of prenotification, and my understanding is that State and local communities don't want that kind of information, the kind of information that is provided in Mr. Applegate's bill; that that is not useful to them, that there is other information, flow information, that they are interested in, and other information that would be helpful, but——

Mr. **Gray**. I would ask the gentlelady, have you actually taken Mr. Applegate's bill line-by-line and analyzed it?

Ms. **Douglass**. Yes, I have. I have read every word of Mr. Applegate's bill.

Mr. **Gray**. Well, how could you improve it? Are you just taking the position that we don't need any legislation?

Ms. **Douglass**. No. I was saying earlier that there are technologies that are developing, for example, the GEOSTAR and RAILSTAR. Are you familiar with those systems, the satellite systems?

Mr. **Gray**. A little bit, yes.

Ms. **Douglass**. Some of those systems have a potential for providing valuable information with respect to truck transportation. The Department of Energy is going to be using the GEOSTAR or RAILSTAR for their nuclear transportation, their high-level spent fuel. Under our bill, we have a requirement for permitting motor carriers, and I would be more than happy in permitting certain carriers of the extremely hazardous chemicals, explosives and nuclear materials, to look at these kinds of systems. Mr. Applegate's bill confines us to one very expensive technology, and I am not against improving the emergency response information that is out there, but I do have concerns with Mr. Applegate's bill.

Mr. **Gray**. In defense of my friend from Ohio, he is a very learned, long-time legislator and, I know, a great man of compromise. As one of the cosponsors, I would like to see some of you maybe come up with some ideas as to how the legislation can be improved. I am sure the gentleman from Ohio would be willing to consider that, rather than just to unilaterally say, you know, "We are opposed to the bill," when we are all here trying to find some way of protecting the public" from harm resulting from transportation accidents.

Thank you, Mr. Chairman.

Mr. **Anderson**. We have another vote.

Mr. Applegate, I know I cut you off a moment ago, before we went to vote last time. Is it all right if I thank them for their testimony and go vote?

Mr. **Applegate**. Please do.

Mr. **Anderson**. Good, good.

Well, I do want to thank Cynthia and her colleagues for an excellent presentation. I think that one thing it has done is made us realize that there are a lot of questions we don't have answers for.

Mr. **Hastert**. Mr. Chairman?

Mr. **Anderson**. I didn't think we were holding a hearing specifically on Doug's bill today, but it looks like we have given it a pretty good hearing.

Mr. **Hastert**. Mr. Chairman, before we excuse them, could I ask a couple more questions of this panel?

Mr. **Anderson**. Yes. Keep it short. I would like to go vote on the next bell.

Mr. **Hastert**. Thank you, Mr. Chairman.

Going back to the anhydrous ammonia thing, some questions arise. You know, I am from a small county, maybe 30,000 people. We have a sheriff's department. We have an ESDA, but right now, today, there are probably 500 to 1,000 anhydrous ammonia tanks moving through the countryside from a central distribution to farms and being moved on those farms. If you had to give notification, the changes from nonflammable gas to a poison gas, all that notification, where does that go to? Who can handle that? How is that going to be dealt with? What kind of responsibilities are you putting on local government?

Mr. ROBERTS. I have been working with the Fertilizer Institute and several of the active highway patrols on this subject, one of which is Illinois and the other California, on transport of ammonia for many years. We worked out all of the regulatory standards for the tanks, so that we would not adversely impact the farming community.

Upon passage of Superfund, Section 306[a] requires us to regulate ammonia in local traffic under Federal regulation. We worked out standards for the marking of the tanks, the placarding of the tanks, the shipping documentation, and we just finished an action in the last year. The decision on the small tanks was that since they are in local traffic, the words "anhydrous ammonia" written on them was sufficient and it was not necessary to carry shipping documents——

Mr. HASTERT. But the change, now.

Mr. ROBERTS [continuing]. And that was all communicated. I am sure those people found out about all those rules, especially the rules that granted regulatory relief.

Mr. HASTERT. I am not talking about the rules. If you put a requirement on the backs of those people to now, every time they move one of those shipments, they have to give notice to somebody, who——

Mr. ROBERTS. Sir, that is not a DOT proposal. Congressman Applegate's bill is proposing that, sir. We have already voiced our opposition to that.

Mr. HASTERT. But your change, your change makes that difference.

Ms. DOUGLASS. Our H.M. 181 does not——

Mr. ROBERTS. H.M. 181 does nothing more to ammonia than require a change in the sign that is displayed on the vehicle, from a green sign——

Mr. HASTERT. And the reporting responsibilities that go along with it.

Mr. ROBERTS. Sir?

Mr. HASTERT. And there are reporting responsibilities that go along with it.

Mr. ROBERTS. No, sir, no changes in any reporting responsibilities whatsoever. None whatsoever.

Mr. HASTERT. I beg to differ with you.

Thank you, Mr. Chairman.

Mr. ANDERSON. Thank you, and I want to thank the panel for being here today. There have been a lot of questions raised.

[The prepared statement of Ms. Douglass follows:]

STATEMENT OF M. CYNTHIA DOUGLASS, ADMINISTRATOR, RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

I am very pleased to be here today to participate in the Subcommittee's consideration of the reauthorization of the Hazardous Materials Transportation Act as propsed in H.R. 4069. My only regret is that the late Chairman Howard, under whose leadership H.R. 4069 was introduced, will not see this important bill move toward enactment. Mr. Howard was committed to assuring the safety of our transportation system and I know he would have been an advocate for positive improvements in hazardous materials transportation.

As the Committee knows, the Hazardous Materials Transportation Act (HMTA) has remained substantially unchanged since its adoption in 1974. In adopting the HMTA, Congress made clear its judgment that the Secretary of Transportation should have broad regulatory powers to establish and oversee a nationally uniform system of regulations, with enforcement thereof, that would preclude a patchwork of differing and conflicting state and local requirements. Quite correctly, Congress viewed regulatory uniformity as an essential component of safety. At the same time, Congress recognized the role that state and local governments play in assuring safety. To reconcile the interests of national uniformity and state and local prerogatives, Congress provided that state and local requirements would be preempted only if they were "inconsistent" with the HMTA or the regulations adopted thereunder.

Throughout the thirteen-year history of the HMTA and RSPA's program implementing the authority granted in the Act, the subject of hazardous materials transportation safety has been characterized by an ever-increasing involvement of state and local governments. While I can understand the states' involvement and in some cases believe it enhances safety, I can also testify to the fact that it can often create confusion and unintentionally negatively affect safety. It certainly impacts on transportation efficiency. Consequently, there is a compelling need to clearly articulate the role of all levels of government. This is necessary to assure that critical safety issues are addressed in a manner that contributes to a safe and efficient transportation environment. H.R. 4069 makes significant contributions toward these ends.

Before discussing the key provisions of the bill, I would like to put them in the context of RSPA's hazardous materials program and some of our ongoing and contemplated initiatives. To support these initiatives, we have made a budget request for FY 1989 of $9,695,000, an increase over FY 1988 of $1,212,000. Our budget request also includes seven new permanent positions. You may be interested in knowing that since I have been at RSPA our budget has increased by 33% and our staff by even more.

To meet its responsibilities under the HMTA, RSPA conducts a multi-faceted regulatory program that consists of six interrelated parts.

We developed, promulgate and maintain regulations governing all aspects of hazardous materials transportation;

We provide for and coordinate enforcement of the regulations to assure industry-wide compliance;

We train those charged with enforcing the regulations;

We collect, analyze and disseminate data and other information related to hazardous materials transportation;

We interact with constituency groups concerned with hazardous materials transportation safety; and

We provide assistance in cooperation with the Federal Emergency Management Agency (FEMA) and the Environmental Protection Agency (EPA) to those who must respond to hazardous materials transportation accidents.

I will address each of these program parts.

Regulatory Program

RSPA develops and issues regulations governing hazardous materials transportation by all modes (excluding bulk transportation by vessel, standards for which are developed by the U.S. Coast Guard). The Federal regulations cover definitions and descriptions of hazardous materials; hazard communication, including preparation of shipping papers, package marking, labeling, and vehicle placarding; packaging requirements; and loading and handling procedures for shippers and carriers. The regulations apply to air, rail, vessel, and highway transport. We also have responsibility for assuring consistency of the regulations within the international community.

FY 1987 and FY 1988 accomplishments of the hazardous materials regulatory program include:

Performance-Oriented Standards.—RSPA has published a Notice of Proposed Rulemaking (NPRM) on performance-oriented packaging standards which proposes a significant reduction in the volume of the Hazardous Materials Regulations and their alignment with international standards. Performance-oriented standards are expected to promote flexibility and technological advances in packaging, improve safety by relating packaging performance to the transportation environment, and reduce the industry and government burden inherent in the regulatory exemption process. The comment period on the NPRM closes today. For the next several months, we will be thoroughly evaluating the hundreds of comments we have received in order to develop final rules. We expect the rulemaking to be completed in FY 1989.

Cargo Tank Safety.—Pending regulatory proposals address the design, maintenance, and testing of highway cargo tanks, such as those used to deliver gasoline and other fuels. RSPA has received numerous comments, including substantive alternative proposals. The complexity and scope of the issues addressed by the commenters exceeded expectations and have lengthened the evaluation process. Accordingly, RSPA has conducted a series of working meetings with these commenters to clarify the meaning of their comments and to discuss the alternative proposals made in comments. These meetings, which are open to the public, have continued into 1988. Despite the complexity of the rulemaking and the time-consuming process of resolving the many diverse issues, we anticipate publication of a final rule in early FY 1989.

Training.—This planned rulemaking will address comprehensive training requirements for persons involved in the transportation of hazardous materials, particularly for drivers of commercial motor vehicles. It will complement regulations to be issued by the Federal Highway Administration (FHWA) addressing commercial drivers' licenses and regulations issued by the Occupational Safety and Health Administration. RSPA expects to issue an NPRM this June and a final rule in FY 1989.

Emergency Response Communication Standards.—In order to improve emergency response communication, we have proposed in an NPRM that: (1) each shipping paper bear a phone number where someone can be reached 24 hours a day for emergency response information, and (2) each vehicle transporting a hazardous material have a copy of the Department's Emergency response Guidebook (ERG) or an equivalent source of first responder information. More than one million copies of the ERG, which was revised in 1987, have been distributed. RSPA plans to publish a final rule this June.

Highway Routing of Hazardous Materials.—RSPA has issued an Advance Notice of Proposed Rulemaking (ANPRM) to consider whether to adopt more specific routing regulations for a non-radioactive hazardous materials (specific routing regulations for radioactive materials were adopted in 1981). This initiative, seeks to address the issue of routing under current HMTA authority. In H.R. 4069 we have requested Congressional direction to improve our highway routing authority. I discuss this issue later in my testimony.

Intrastate Transportation of Hazardous Materials.—We are considering a proposal to extend application of the Hazardous Materials Regulations to all intrastate transportation of hazardous materials. This would result in increased uniformity of requirements and application of the regulations to previously unregulated activities. We are reviewing comments on an ANPRM and expect to publish an NPRM in early FY 1989. This initiative is also a part of H.R. 4069.

Driver Licensing of Hazardous Materials Drivers.—RSPA is working with FHWA to develop a regulation concerning minimum Federal standards for testing and licensing commercial vehicle operators as required by the Commercial Motor Vehicle Safety Act (CMVSA) of 1986. The primary provision limits commercial operators to no more than one driver's license and requires them to be tested and licensed to drive the particular types of commercial vehicles they will operate. The regulations will also cover such areas as notification requirements, employer responsibilities and testing of operators, including special testing requirements of drivers who will be hauling hazardous materials. The driver must be tested in accordance with all appropriate regulations under the HMTA and have working knowledge of those regulations. Hazardous materials drivers will be required to demonstrate knowledge of proper handling, operation of emergency equipment, and emergency response procedures. In accordance with CMVSA deadlines, the FHWA will issue a final rule in the summer of 1988.

Registration Program.—In response to a recommendation in the Report of the Secretary's Safety Review Task Force, RSPA undertook and has now completed a study of the feasibility of establishing a limited hazardous materials registration program. Based on that study, we will issue an ANPRM this summer to consider the most appropriate approach to a registration program applicable to persons involved with the transportation of those hazardous materials determined through the rulemaking to be suitable for inclusion. This program is intended to supplement registration programs already in effect in the Department from which information about hazardous materials transportation may be obtained (e.g., the safety audit program of the FHWA, and current registration requirements for certain hazardous materials container manufacturers).

During the remainder of FY 1988 and in FY 1989, RSPA expects to publish final rules concerning a number of other issues, including packaging standards for uranium hexafluoride, standards for the construction of fireworks, overpacks for radioactive materials, and incident reporting. We also anticipate publishing NPRM's addressed, in part, to detection and repair of cracks and other defects in tank cars, quantity limitations on aircraft, specifications for cylinders, standards for explosives, and regulation of molten metals.

RSPA also represents the Department in several international forums that develop international standards for the transportation of hazardous materials. Application of international standards by governments throughout the world has a direct economic impact on U.S. hazardous materials shippers and carriers involved in export trade. The various international organizations in which RSPA participates are as follows:

1. The United Nations Committee of Experts on the Transport of Dangerous Goods, and its subsidiary bodies—
   (a) The Group of Experts on Explosives; and
   (b) The Group of Rapporteurs;
2. The International Maritime Organization Committee on the Carriage of Dangerous Goods;
3. The Dangerous Goods Panel of the International Civil Aviation Organization;
4. The Group of Experts on the Transport of Dangerous Goods of the Economic Commission for Europe Inland Transport Committee; and
5. The International Atomic Energy Agency. RSPA's objective has been and will continue to be ensuring that the standards adopted by these international bodies provide satisfactory levels of safety and do not create artificial trade barriers to the U.S. hazardous materials industry. Some important areas involving future international activity include new standards, and adjustments to standards, pertaining to marine pollutants, gases, explosives, performance-oriented packaging, and radioactive materials.

Enforcement Program

Under the delegations of authority in the Department of Transportation, each model administration is responsible for enforcement of the hazardous materials regulations applicable to its mode. RSPA is specifically responsible for the enforcement of regulations applicable to the manufacture, reconditioning, and retesting of most DOT specification containers, and multimodal transportation of hazardous materials. RSPA also is responsible for coordination among the modal administrations.

The level of effort and resources committed by the Department to hazardous materials enforcement has steadily increased since 1984. Over the four year period, the number of inspectors assigned specifically to hazardous materials has increased, as has the percentage of total inspector time dedicated to hazardous materials inspection activities. As I note later in this statement, this level of direct effort is supplemented by substantial grant funding to the states.

To carry out its enforcement responsibility, the Department has a cadre of more than 1,000 full and part-time inspectors. In 1987 this equated to 208.8 total work years distributed as follows: the Federal Highway Administration spent 22.1 work-years; the Federal Aviation Administration spent 17.5 work years; the Federal Railroad administration spent 48 work years; the U.S. Coast Guard spent 112.2 work years; and RESPA spent 9 work years on hazardous materials enforcement. The number of inspectors is increasing and will increase further as we develop our Federal/state partnership which will result in more state inspectors to complement the Federal effort. In FY 1989, RSPA is requesting an increase of $375,000 and three positions over the FY levels for enforcement.

RSPA has continued its leadership among the modes for hazardous materials transportation enforcement by sponsoring bimonthy enforcement meetings. Through this process, RSPA implemented with the full cooperation and assistance of the other DOT administrations a set of intermodal interpretation procedures. Under these procedures, RSPA's Chief Counsel's Office is responsible for issuing all interpretations of the Hazardous Materials Transportation Act and the hazardous materials regulations issued thereunder. Each interpretation is fully coordinated with the other agencies prior to issuance, and is disseminated to agency counterparts in the United States. A separate "user friendly" data base has been established in the Hazardous Materials Information System, which has greatly simplified retrieval of interpretations. We will enhance dissemination by publishing abstracts in our Hazardous Materials Newsletter as well as making them available to trade publications.

A key to the effectiveness of our enforcement efforts has been RSPA's interaction with the states. The states play a predominant role in hazardous materials enforcement because of greater total inspection resources and substantial funding assistance under the Motor Carrier Safety Assistance Program (MCSAP), a Federal grant program under the Surface Transportation Assistance Act. Since the inception of MCSAP in 1983, the Department has strongly supported increased funding levels for the program. This effort has resulted in an FY 1988 appropriation of $47 million (up from $8 million in FY 1984.

In FY 1989, we plan to continue sponsoring Cooperative Hazardous Materials Enforcement Development (COHMED) Program workshops. It is through COHMED that the Federal and state personnel responsible for hazardous materials transportation share information regarding regulations, training, interpretations, enforcement, and research which will assure a better regulatory scheme and more uniformity. Both goals provide the public with an increased level of safety. These workshops have been very successful. In fact, we have initiated a number of recommendations developed in the workshops including the interpretation procedures just discussed and enhancing the ability of the states to tap into the Department's hazardous materials data bases; development of a Hazardous Materials Modular Inspection/Enforcement Training Package; development of a COHMED newsletter, the "Reporter"; development of a quick notification bulletin, the "Bullet"; and expansion of COHMED activities to encompass emergency response planning and training.

We also plan to continue supporting regional workshops focused on radioactive materials transportation issues. These workshops were implemented by RSPA in cooperation with the Department of Energy, the Nuclear Regulatory Commission, and FEMA to foster coordination and cooperation among states, Indian tribes, and Federal agencies which have regulatory and enforcement responsiblities for assuring the safe transportation of radioactive materials. These workshops provide a forum for sharing information regarding routing of nuclear materials, emergency preparedness and response to accident, inspections and enforcement, and notification of shipments.

In FY 1989, RSPA also plans to initiate a "Hazardous Materials Specialist Program" under which selected state personnel could spend brief tours of duty with RSPA. They would be expected to participate in administering the Federal Hazardous Materials Safety Program, recommend methods for improving Federal/state relationships, and return to their organizations with greater knowledge and ability to operate their state programs. The Hazardous Materials Specialist Program will promote closer Federal and state cooperation by creating greater understanding of differences in repective approaches to problem solving.

Training

A particularly important aspect of the national program to assure safety and uniformity in the transportation of hazardous materials is the provision of appropriate training to Federal and state enforcement personnel who have responsibility for the enforcement of the hazardous materials regulations.

The Secretary established the Transportation Safety Institute (TSI) in Oklahoma City, Oklahoma to improve transportation safety and security by designing and conducting training programs responsive to modal and intermodal requirements. Hazardous materials transportation safety is one of the subject areas for which TSI provides training services. In FY 1988, RSPA will spend approximately $314,000 to train safety professionals in the requirements for the safe transportation of hazardous materials. In FY 1989, we expect to spend $525,000 and offer six hazardous materials courses along with new training services. RSPA has also developed a self-study course for state enforcement specialists which TSI has used successfully in combination with its own resident enforcement training. When an enforcement specialist completes the self-study course prior to attending TSI training, that enforcement specialist requires only one week of resident training compared to the normal two weeks needed without prior home study. This approach to training allows us to provide technical information and guidance to a significantly greater proportion of our constituency than could be reached within the same budget by exclusive reliance upon direct classroom instruction.

As in FY 1988, RSPA's FY 1989 request covers partial costs of staffing training at TSI. The state share of funding for training can be substantially met through dollars received from the MCSAP.

Data Collection, Analysis, and Information Dissemination

RSPA has responsibility for collecting, analyzing, and disseminating data. This is important to our regulatory and enforcement program as well as useful to state and local emergency response planners. We are requesting $1,745,000 to carry out this responsibility. This is $176,000 more than requested in FY 1988. In addition, we are requesting one additional position for data collection, analysis, and dissemination.

Our request will allow us to maintain our Hazardous Materials Information System (HMIS) and allow us to expand its scope and availability. Specifically, we intend to expand the use of HMIS by the states; expand our trend analyses and policy development; increase the education and training of users; expand the compatibility of HMIS with other computer systems; and develop new data bases and more user friendly software.

We plan to make additional improvements in the data collection program and to build on two significant projects initiated in FY 1987.

One such project is a comprehensive review by the Transportation Systems Center (TSC) of our data collection program. TSC has been contacting a variety of our constitutents such as the states, reviewing our current program, and evaluating the current use of the data. TSC will be making recommendations in FY 1989 as to further information we should be collecting and how we can make better use of existing data.

Second, as noted previously, we are considering applying our Federal regulations to a broader range of intrastate shippers and carriers. This would significantly increase the amount of data we collect.

Constituent Support and Coordination

Another important part of our hazardous materials transportation program is our contact and interaction with members of the regulated community, concerned public citizens, and the state and local government officials responsible for implementing related government policy at a regional level. We are requesting a budget of $355,000 for FY 1989, which is $114,000 more than last year. We are also requesting one additional position for ongoing liaison with our state and local counterparts.

To carry out our coordination and constituent support responsibilities, RSPA created the Federal, State and Private Sector Initiatives Division to provide communication and coordination between RSPA and other elements of the Department, other Federal agencies, state and local government agencies, and private-sector groups. It also supports State and local governmental officials in their enforcement and emergency response activities.

RSPA has been effective in improving intermodal coordination in the Department through establishment of a DOT Intermodal Hazardous Materials Coordination Committee made up of representatives from each of the modes—FHWA, FAA, USCG, FRA, and RSPA, which is the chair. We meet every two months to review rules, research and other issues affecting hazardous materials transportation.

We are also working to improve our communication and coordination with other agencies. As an active member of the National Response Team, RSPA works with the other 14 Federal members in all aspects of hazardous materials safety.

In this regard we are working to implement a national strategy to create an maintain an active and continuous learning system for personnel involved in emergency preparedness and response, with more emphasis on innovative, nontraditional learning supported by conferences, workshops, simulations, and some traditional classroom training.

To enhance our communication with the states, we have implemented the previously discussed COHMED and radioactive materials workshops. The radioactive materials workshops are scheduled at various locations across the country where there is a current or potential high interest in the movement of nuclear materials. Six workshops have been held since the program began in FY 1987. RSPA brings together states, Indian tribes, and other Federal agencies to exchange concerns and information.

RSPA also serves within the DOT as the single point of contact between the Department of Defense (DOD) and DOT in matters involving military shipments of hazardous materials. We have been meeting with DOD on clarification and resolution of issues involving DOT audits of all Military Traffic Management Command carriers, DOD problems with the U.S. adoption of the new U.N. performance-packaging and marking requirements, emergency response procedures involving shipments of explosives, and most recently on overseeing DOD shipments of explosives, and most recently on overseeing DOD shipments of nitrogen tetroxide (rocket fule) to Vandenberg Air Force Base in California.

Emergency response

The developments outlined above convince me that we are moving surely and steadily toward an effective national scheme for developing and enforcing hazardous materials safety regulations. Even so, we cannot eliminate all accidents involving the release of hazardous materials.

In the event of such an accident, it is vital that efforts to lessen the hazards be initiated as rapidly as possible. For this prompt response to be possible, a number of actions must be taken, including: (1) notification of appropriate Federal, state, and local government agencies; (2) proper identification of the physical or chemical properties of the released material; (3) determination of the most effective way to safeguard life, property, and facilities from the associated hazards; and (4) use of the most effective methods to clean up the site and to restore normal conditions. State and local jurisdictions have the primary role in responding to transportation emergencies because of the infinite number of possible accident sites, the wide range of materials which may be involved, and the critical need for immediate action. These activities require a Federal, state, local and private-sector partnership. No one can do it alone.

In FY 1989, RSPA expects to spend $480,000 on emergency response activities. As previously mentioned, we are also requesting one additional staff.

RSPA has worked in the last few years to increase the clarification of roles, to increase coordination and communication, and to access needs. As I have noted, RSPA has jointly sponsored workshops with FEMA and EPA on emergency response; joined the National Response Team and sought to increase the coordination and attention given to emergency response; and has completed a Memorandum of Understanding (MOU) with FEMA to more clearly define our roles. Under this MOU, FEMA has the primary responsibility for emergency response planning and training. In addition, FEMA and RSPA have completed a study of Emergency Response Planning and Training. RSPA and FEMA have established an Information Clearinghouse to provide emergency response planning and training information to state and local planners. We are working with the International Bridge, Tunnel and Turnpike Association to survey the flow of hazardous materials on the Pennsylvania Turnpike.

RSPA is also developing a contract with the International Association of Fire Chiefs to survey operational state, regional and local emergency response systems. An analysis will be made of the various types of systems, including implementation and operation. The study results will provide planners at all levels with the logistics of operation and the relative costs for implementation and maintenance of equipment and personnel resources for each option.

These are all new initiatives RSPA has undertaken in the last two years to improve the Federal role in hazardous materials transportation emergency response.

In addition, we are continuing a number of other initiatives which have provided valuable assistance to state and local responders. For example, we have republished the Hazardous Materials Emergency Response Guidebook (ERG). The ERG is designed to meet the needs of various government agencies directly involved in responding to accidental releases of hazardous materials during transportation. It is being updated every three years to reflect changing information and technology. Under a mandatory identification system, four-digit numbers identifying the hazardous materials being transported must be shown on orange display panels or on the placards that are required on tank trucks, rail cars, and portable tanks carried on vehicles. The ERG enables persons who are unfamiliar with chemical names to identify a hazardous material through the use of the four-digit number, and to determine what safety measures should be taken immediately in the event of an accidental release. It is intended for use by fire fighters, police, and other emergency services personnel as a guide for initial actions to be taken to protect themselves and the public when they are called on to handle incidents involving hazardous materials. Initial emergency response guidance is provided for virtually all hazardous materials that are transported in the United States. RSPA has distributed more than one million copies of the ERG.

An important, RSPA-supported mechanism for assisting government agencies in providing emergency services when hazardous materials incidents occur is the Coast Guard-operated National Response Center (NRC). The NRC, which was established in August 1974, provides a communication network which can notifiy appropriate state and local officials of a hazardous materials incident.

The NRC is data-linked to CHEMTREC, a service of the Chemical Manufacturers Association, which provides a centralized source of chemical emergency response information and assistance on a round-the-clock basis. Although CHEMTREC does not operate under a legislative mandate, Congress provided authority in 1985 for the Department to utilize the private sector in meeting DOT's mandate to have a central reporting mechanism. CHEMTREC operates as a chemical industry support system for providing asssitance to anyone requesting help during an emergency arising from the accidental release of chemicals. CHEMTREC maintains a data base containing specification information concerning more than 18,000 chemicals. Both the NRC and CHEMTREC response centers provide toll-free, 24-hour service to emergency services personnel who are prepared to respond to hazardous materials incidents.

RSPA has encouraged the industry over the last few years to sponsor more initiatives in this area. The list of industry's accomplishments is impressive. These industry programs can help reduce the Federal funding necessary if the programs are developed and coordinated with Federal, state, and local planners and the programs are then made accessible to those in need. Among several successful industry programs are training videos; a toll-free number providing planning information to planners and consumers; and the Community Awareness Response Guidebook, to name just a few. One additional program which holds great promise is a program referred to as CHEMNET, a mutual aid network betweeen chemical shippers and for hire contractors that will provide advice and assistance at the scene of a major chemical distribution incident.

H.R. 4069

As the above discussion demonstrates, there is a great deal RSPA is able to do, and is doing, under its current HMTA authority. In addition, there is a great deal we have learned about the HMTA and its application to numerous issues and problems over the thirteen years it has been in existence. Based on that experience, we believe the time has come for substantial improvements in the Act which, when taken together, provide the wherewithal for a transportation safety strategy that is predicated on the appropriate assignment of authority and responsibility to each level of government. H.R. 4069 would:

Provide a statutory basis for the Department to determine the validity of State or political subdivision requirements which may conflict with the HMTA or the Hazardous Materials Regulations (HMR) and replace the current advisory process provided by regulation.

Prescribe specific areas of regulations that are exclusively Federal (e.g., shipping papers; communication of hazards by marking, labeling, and placarding; container and packaging standards and manufacturing; and written notification of incidents).

Recognize concurrent jurisdiction in the states and their political subdivisions to adopt highway routes for the transportation of hazardous materials, with those routes being designated in accordance with national standards set by DOT.

Provide a dispute resolution mechanism for settling conflicts between or among states arising from routing decisions.

Establish a safety permitting program applicable to motor carriers of materials toxic by inhalation, class A and B explosives, and highway route controlled quantities of radioactive materials (e.g., spent nuclear fuel).

Clearly extend the Act and the HMR to instrastate operations.

I have attached a section-by-section analysis of the proposal but would like to additionally address several important provisions.

The bill would create a process for determining whether Federal preemption should be asserted against state or local requirements challenged as being at variance with Federal requirements. Since 1976, we have addressed this issue through an administrative process which produces advisory opinions as to whether a state or local requirement is "inconsistent" with a Federal requirement. We developed this process primarily to execute the vague, but critical, provision in the HMTA which declares all "inconsistent" state or local requirements to be preempted. However, because our advisory rulings do not have the force and effect of law they are not binding and may not be challenged in court. Consequently, they do not contribute as much as they could to assuring uniformity, and they do not provide a sufficient source of guidance to state and local governments. To rectify this situation, our proposal would elevate the preemption process to statute, remove the vague term "inconsistent", and provide for judicial review of our decisions.

In creating a highway routing scheme, H.R. 4069 addresses one of the most important aspects of hazardous materials transportation. Currently, the Department prescribes general routing requirements for carriers of non-radioactive hazardous materials, and more specific requirements for carriers of radioactive materials. The bill would shift the highway routing responsibility from the Department to the states and local governments where it belongs. However, with approximately 30,000 jurisdictions having regulatory authority it is essential to both safety and an efficient transportation system that the exericise of that authority to establish highway routes for hazardous materials be undertaken in a manner which assures continuity and consistency, to the maximum extent practicable. I believe that the approach taken in H.R. 4069 of recognizing concurrent jurisdiction in the Federal Government and state and local governments in addressing highway routing assigns the proper role to each level of government.

In implementing the highway routing provisions of the bill, the Department would establish the procedural framework, including the necessary risk assessment methodologies, that all jurisdictions would follow. A key procedural step provided in

H.R. 4069 is the requirement that an adopting jurisdiction consult with and obtain the concurrence of, adjacent jurisdictions affected by the proposed route. Should agreement of the adjacent jurisdictions not be obtained. The bill provides for dispute resolution whereby the Department would arbitrate the matter.

The dispute resolution provision is one of three provisions in the bill designed to provide an overall framework for the proper assignment of roles among levels of government. The bill also designates certain subject matter areas that are exclusively Federal, including shipping papers, hazard classification, hazard communication, and packaging. These areas have been determined over the course of our operation of the hazardous materials program to be subjects which must be uniform in implementation and understanding throughout the Nation to assure both the safety of operations and consistent emergency response (i.e., the Department's requirements on hazard classification and hazard communication are tied in directly to our Emergency Response Guidebook).

Finally, we have proposed a safety permitting provision applicable to motor carriers of those hazardous materials which present a high degree of risk in transportation or are of particular public concern. Included are explosives, materials that are toxic by inhalation, and high level radioactive material (e.g., spent nuclear fuel). I believe this limited safety permitting program is a necessary next step in the evolution of the Department's hazardous materials program under the HMTA. By requiring the issuance of a safety permit to the motor carriers of these materials, the Department will have identified who and where these carriers are and what they transport. This information will greatly enhance the Department's enforcement oversight as well as that of the states. Better focused inspection coupled with the sanction of revocation or suspension, create the strongest possible incentive for carriers to operate in compliance with all applicable regulations. An additional compliance incentive is the prohibition against a shipper of these materials offering them to a carrier which does not possess a valid safety permit.

I am proud of the achievements made by the Department under the HMTA, but believe more can and must be done. I am hopeful that the program I have described today will receive the additional tools provided in H.R. 4069, and I look forward to working with the Subcommittee to achieve that result.

That concludes my testimony. Thank you.

Mr. ANDERSON. I am going to recess to go and vote in just a minute or two, but so you know what we are going to do, as soon as we come back—Cynthia, we are all through. We do have another panel, a panel that we are going to put on, and that panel discussion we assume will take us roughly 45 minutes or so, and then we are going to recess for lunch because I have, I think, four panels after that today. This time we will recess for about 15 minutes while we go vote. Thank you very much for your presentation.

Ms. DOUGLASS. Thank you.

[Recess taken.]

Mr. ANDERSON. The meeting of the committee will come to order. We are going to have a panel discussion now, and following this panel we are going to break for a short lunch recess because we have four panels, at least, following this one.

The panel this time is Jim Makris, Director of Emergency Response Preparedness Staff, Office of Solid Waste and Emergency Response, United States Environmental Protection Agency; Denzel L. Fisher, Emergency Management Specialist, Technological Hazards Division of the Federal Emergency Management Agency; and Hugh L. Thompson, Jr., Director, Office of Nuclear Material Safety and Safeguards, United States Nuclear Regulatory Commission.

We have the prepared statements of all three of you. They will be made a matter of the record in their entirety, so you can present them any way you would wish. I suppose we might as well take them in that order: Mr. Makris, Mr. Fisher, Mr. Thompson. Thank you very much. The floor is yours.

TESTIMONY OF JAMES L. MAKRIS, DIRECTOR, EMERGENCY RESPONSE PREPAREDNESS STAFF, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY PAUL S. MUSHOVIC, OFFICE OF SOLID WASTE; DENZEL L. FISHER, EMERGENCY MANAGEMENT SPECIALIST, TECHNOLOGICAL HAZARDS DIVISION, FEDERAL EMERGENCY MANAGEMENT AGENCY, ACCOMPANIED BY DOROTHY M. NOCITA, TRAINING SPECIALIST, AND KEVIN CLARK, OFFICE OF CONGRESSIONAL RELATIONS; AND HUGH L. THOMPSON, JR., DIRECTOR, OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS, U.S. NUCLEAR REGULATORY COMMISSION

Mr. MAKRIS. Thank you, Mr. Congressman. As the morning progressed, a good many issues were raised and some points in the testimony were covered, and so what I would prefer with your permission is, rather than reading it, to summarize some points and in the process of that weave through some observations on some of this morning's proceedings. If that is acceptable, we will proceed along that line.

We are very pleased to be here and have an opportunity to talk about EPA's initiatives and activities regarding hazardous materials. My name is Jim Makris. I am the Director of the Preparedness Staff, and in this position I am responsible for chemical preparedness and prevention initiatives of the agency. This includes the implementation of the Emergency Planning and Community Right to Know Act, Title 3. I also serve as the chairman of the National Response Team, an organization that was referred to frequently this morning, and I am responsible for managing or developing programs dealing with the prevention of chemical accidents from fixed facilities.

As a result of these responsibilities, we have an opportunity to assist in the development of coordinated and cooperative Federal, State, and local efforts in planning and preparedness for emergency response in the event of a hazardous materials incident. Transportation incidents involving hazardous materials are very similar in most respects to incidents at fixed facilities, except for the absence of specific knowledge of what might be passing through.

Presumably with a facility you know what is there. With a transportation vehicle you may or may not know what is passing through, but once the event has occurred, the requirements that are imposed on State and local governments are essentially the same. The training and information needs are the same. There may be some particular requirements for industrial employees—drivers, handlers—because they do present a unique audience which requires special assistance in training, particularly around notification obligations when they are on the highways or traveling through communities.

However, planning and preparation are key to an effective response in the event of any hazardous materials incident, and if a community has planned for and is trained to respond and deal with a chemical release from a fixed facility, it is well on its way to being able to fully handle a transportation incident. As long as there is a competent infrastructure in place, emergency response can and will be effective.

Title 3 established that infrastructure. It established an intricate State and local network to provide for planning and preparation. The infrastructure includes assistance in training, developing information sources for local communities, and responding to hazardous materials incidents. While this work under title 3 has just begun, it is critical in our view that all initiatives related to dealing with State and local governments key off on that infrastructure that has been established.

The details of title 3 are summarized in the testimony and are well known to most of you, but let me point out one or two key elements. First let's talk about the infrastructure. It established this intricate State and local network, starting with the Governor. Title 3 required that the Governor establish within his State a State Emergency Response Commission.

All States have done that. All 50 States and 6 additional jurisdictions that have responsibilities under title 3 have in fact created State Emergency Response Commissions, ranging from one or two people on them to large ones with 31 or 32 folks. Most of them are broad-based. More than half include transportation officials, so what is existing in most State capitols is an infrastructure which can start operating around the issue of hazardous materials planning, and start providing some energy and technical assistance in training on the issue at the local level for dealing with accidents when they occur.

In turn, the State Emergency Response Commissions in each State were required to establish local emergency planning committees, and in this Congress was extremely explicit. It identified 15 different categories of folks that need to be involved in this emergency planning committee at the local level, ranging from fire fighters and police officials to industrial representatives, to environmental groups. It also included the media as one who not only has a responsibility to understand, to be a participant in the evacuation or the response process, but also to keep the pressure on, if you will, in terms of getting the planning done. It also includes environmental officials, transportation officials, and health and medical officials and industrial hygienists.

The structure created under title 3, therefore—the Governor designates a State Emergency Response Commission who designate local emergency planning committees, and there are some 3,500 of those presently established and involving 100,000 people or so—is consistent with the basic premise of the Federal notion of how hazardous responses must be dealt with, whether from a fixed facility or transportation, which means that State and local governments must first respond. State and local governments must first be trained. State and local governments must first have complete understanding.

The Federal structure—the National Response team, which is the 14 Federal agencies that have been mentioned already today, the Regional Response Teams, which are the regional counterpart of those Federal agencies, plus State participation, and the on-scene coordinator, who is from either the Coast Guard or the Environmental Protection Agency, and who becomes the Federal presence at a disaster scene— are all supportive to this effort which must first be directed from State and local governments. In addition to this broad structure, there are obviously very special forces like the United States Coast Guard Strike Force, the Environmental Response Team, which is part of EPA's organization, the National Oceanographic and Atmospheric Administration's expertise in their scientific support coordinators.

The second issue: Title 3 demanded consistency among Federal agencies. Cynthia Douglass and I have long argued the importance of this, and have agreed, and as a matter of fact have put several documents together, together. Even before Congress passed title 3, work had begun between FEMA and EPA, the Department of Transportation and the U.S. Coast Guard, to provide some unified guidance to State and local governments on how to develop a hazardous materials contingency plan. It borrowed from some material previously put together by the Environmental Protection Agency, the well known FEMA-10 put out by the Federal Emergency Management Agency, and from some material put out by the Department of Transportation and the Coast Guard.

This book, this document, this piece of guidance which collectively was developed by those four agencies, later became a matter of congressional mandate as they said the National Response Team—the National Response Team—would put out specific guidance on State and local government's responsibilities in planning for hazardous materials. This orange book became the product of that federally mandated, congressionally mandated obligation for the Federal agencies to get their act together on hazardous materials emergency planning.

In addition to this, as a result of some leadership of FEMA and the Preparedness Committee of the National Response Team, some criteria have been developed specifically for dealing with how does one review the acceptability of a plan at the local level. And, third, we are currently working on a document—at the moment it is only carrying the imprimatur of the United States Environmental Protection Agency, FEMA, and the U.S. Department of Transportation—called "Technical Guidance for Hazard Analysis." It, too, constitutes a document where the Federal agencies have agreed on how to communicate with State and local governments on what they must do to best prepare for a hazardous materials event, so we think that the consistency is a terribly important issue and we are working hard to do that.

Title 3's third major component deals with training. In title 3 the Congress provided FEMA with $5 million annually for 4 years to specifically deal with training programs regarding hazardous materials, using existing mechanisms within the Federal Emergency Management Agency—their consolidated cooperative agreement process—and therefore creating no new administrative burdens for the agencies or for the States. The $5 million has been disbursed for 1987 and we are working on the dispersion of those funds for 1988.

In order to be sure that it is specific toward hazardous materials training obligations, while we are using a standard FEMA structure for putting the money out, we are also tying it into the State Emergency Response Commission, the Governor's designee for dealing with hazardous materials preparedness and response. We would urge that any additional funds that may yet be flowing to this hazardous materials emergency preparedness activity, particularly in training, deal through the similar structure that has already been created—the SERC structure, and perhaps the consolidated cooperative agreement structure of FEMA.

In conclusion, I think it is essential that planning, training, and exercising efforts do not differ from the structure that has presently been put together. Clearly responders need early warning in the event of an accident and must have knowledge of the chemicals involved. By working under title 3 on the fixed facilities, they will build their familiarity with chemicals, chemical characteristics, chemical effects, chemical involvement, chemical treatment, medical treatment that is required for people who are exposed to those chemicals. That is easily transferable when the accident takes place from a transportation vehicle versus a fixed facility. The law requires that transportation be involved. Routes must be identified. Transportation officials must be part of the planning process.

It is our view that whether or not the incident is transportation related or confined to a fixed site, all training initiatives, technical assistance initiatives, should build upon this infrastructure. We believe that with that infrastructure in place, involving broad-based segments of the community and under the direct leadership of the Governor through his State Emergency Response Commission, we will all be better off. We will reduce environmental insults. We will respond to them more quickly and, with God's help, we will save some lives.

Thank you.

Mr. ANDERSON. Thank you, Jim. We will hold our questions until we complete the panel.

Mr. Fisher?

Mr. FISHER. Thank you, Mr. Chairman. I am pleased to appear before this committee today to discuss the Federal Emergency Management Agency's hazardous materials program. I would just like to highlight a few of FEMA's hazardous materials activities.

The Federal Emergency Management Agency's hazardous materials program involves working with other Federal agencies, State and local governments, and the private sector to provide guidance, deliver technical assistance, facilitate information sharing, and promote interagency coordination of emergency preparedness, response, and mitigation. The overall goal of the program is to reduce the frequency and severity of HAZMAT emergencies through enhanced Federal, State, local, and private sector capability.

The FEMA hazardous materials program covers all types of accidents, including those in transit and those at fixed facilities. From an emergency management perspective, preparedness activities for response to transportation accidents and fixed facility accidents are quite similar. FEMA's HAZMAT program fits in with its all-hazards approach to emergency management. That approach recognizes the economies in using a single, integrated emergency operations plan for the common response functions associated with all types of emergencies.

At FEMA, the Office of Natural and Technological Hazards establishes overall policy and general procedures for the program and is the principal FEMA office for administering the hazardous materials program. The Office of Training, on the other hand, develops and delivers training courses on hazardous materials and is responsible for administering the $5 million in training funds authorized under title 3 of the Superfund Amendments and Reauthorization Act.

Much of FEMA's work in hazardous materials is accomplished through the National Response Team. As Mr. Makris stated, the NRT consists of 14 Federal agencies. We are one of its active members, and we also chair the NRT's preparedness committee, and we are very active in all the other committees of the NRT.

In particular, our work with other agencies—the Department of Transportation, for one, we work with them on several fronts. First, as Ms. Douglass reviewed in her remarks, FEMA and DOT submitted a joint report to the Congress in July of 1986 which provided the status of hazardous materials training, planning, and preparedness.

We also in April 1987 entered into a memorandum of understanding to establish joint initiatives dealing with planning, training, and information exchange. Again, Ms. Douglass covered that very well and talked about our collaboration with DOT in operating the National Hazardous Materials Information Exchange, which provides up-to-date information on Federal HAZMAT training courses and materials, public and private sector HAZMAT activities, upcoming events and meetings, and recent legislation and regulations. Presently there are more than 2,000 individuals nationwide currently on the system.

FEMA also is a cooperating agency in the annual series of regional workshops sponsored by DOT for States, Indian tribes, and other Federal agencies involved in the transportation of radioactive materials, as well as involved in their workshops on COHMED. FEMA chairs the Federal Radiological Emergency Preparedness Coordinating Committee, and serves with DOT as a cochair of its Transportation Subcommittee. Through that subcommittee, the guidance for developing State and local radiological emergency response plans was published and distributed some years ago. That document is currently being revised and will be available later this summer.

As Mr. Makris stated, FEMA has worked very closely with the EPA in several areas of hazardous materials program development and implementation, primarily through the National Response Team, but one such project that we recently completed with EPA includes Section 305[b] of title 3 which required EPA to review emergency systems for monitoring, detecting, and preventing releases of extremely hazardous substances, as well as public warning systems related to such releases. EPA asked FEMA to coordinate that portion of the review related to the public warning systems. Results from that study should be very useful in furthering the importance of public warning systems in response to hazardous materials incidents.

In the area of training, which has been covered as well, FEMA activities are coordinated by the Emergency Management Institute and the National Fire Academy in Emmitsburg, Md. More recently, a hazardous materials contingency planning course was developed in cooperation with the DOT and EPA, in a train-the-trainer course for developing contingency planning. That course has now been offered to several hundred students and is being conducted in several places across the United States.

Also as has been covered, section 305 of title 3 authorized FEMA to provide $5 million a year for 4 years to support State and local government and university-sponsored hazardous materials training. We have worked very closely with EPA in coordinating this program and, as Mr. Makris stated, reaching cooperative agreements. Those agreements allow for the funds to be provided, along with technical assistance, to the States, and the States in turn accomplish mutually negotiated and agreed upon work objectives.

With respect to planning, we have been instrumental in development of the Hazardous Materials Emergency Planning Guide through the National Response Team, the orange book which Mr. Makris showed you. As he mentioned, this guide was a requirement from title 3 for the NRT to provide guidance to State and local governments on hazardous materials emergency management. More important than that, I wish to reiterate the point that the principal agencies involved in this—DOT, EPA, FEMA, and others—were working on these types of guidance documents even before title 3 was passed.

In addition, FEMA and DOT also provided support to EPA in preparation of "Technical Guidance for Hazard Analysis," the green book that Mr. Makris showed you earlier. That was issued in December 1987, and we are currently working with the EPA in expanding that document. That, I understand, will be available later in the year.

FEMA will continue our cooperative efforts with DOT, EPA, and other members of the NRT, in addition to the private sector, in coordinating emergency preparedness and response activities to assure the most effective use of limited resources.

This concludes my remarks, Mr. Chairman. Thank you very much.

Mr. ANDERSON. Thank you, Mr. Fisher.

Mr. Thompson?

Mr. THOMPSON. Thank you, Mr. Chairman. NRC is pleased to appear before you today to testify on this important and timely issue of the transportation of high-level radioactive waste. I would just like to highlight a few points. I think the issues have been fairly well discussed today.

With respect to the transportation of high-level waste—and that is where our major responsibility is, and we are much more narrowly focused than many of the other agencies that have testified before you today. We believe that the regulatory system that has been jointly established by NRC and DOT is a very safe and sound regulatory approach for the transportation of that radioactive waste. In order to carry out the joint responsibility we have entered into a memorandum of understanding with the Department of Transportation. In essence, we have divided the regulatory control up into two basic areas. The first area is DOT. They regulate all carriers and shipments of small amounts of radioactivity. In those cases, DOT is the responsible agency for establishing the requirements of the packaging materials.

NRC is responsible for the cask certification with respect to those where the cask itself provides the major protection of the public health and safety in the event of an accident. The transportation record I think in this case is very, very sound. The accidents themselves have resulted in no significant release of radioactive material. Secondly, the independent study done by the Office of Technology Assessment, I think Ms. Page testified to you earlier on this issue that the NRC's approach with respect to the cask designs that we require. has established a design specification which provides for a much greater protection than offered by any other hazardous materials shipping.

You have heard today that the emergency response capability is a State and local responsibility, and we believe that is correct. Nevertheless, the Federal agencies and NRC in particular stand by, ready to assist with any request for help in this area. The NRC maintains a 24-hour-a-day emergency response center with emergency duty officers available to provide assistance as necessary.

I would note that the existing transportation system for spent fuel can accommodate the increase in spent fuel shipments anticipated by the Department of Energy's nuclear waste policy activities with respect to the high-level waste repository, and the current system can accommodate that increased number of shipments. In addition, I would note that NRC now will be licensing all of those spent fuel casks that DOE would normally be shipping the spent fuel assemblies in.

Finally, I would say that we don't support modification of the current system without some identifiable safety improvements that would result. In this regard, I think that House Resolution 4069, which has been the subject of some comment today, is a very important piece of legislation and, Mr. Chairman, I request that the record remain open for the NRC to provide its views on that important piece of legislation.

With that, that concludes my summary remarks.

[The following was received from Mr. Thompson:]

TYPES AND FREQUENCY OF COMMON AND SERIOUS TRANSPORTATION ACCIDENTS

DOT is the primary Federal agency which maintains and analyzes accident/incident data on hazardous materials transportation. In the analysis of radioactive materials transportation experience, and event is considered to be an "accident" if the transport vehicle is involved in an incident ranging from a minor collision to a major collision, overturn, etc., as contrasted to "handling" incidents, where the vehicle is not involved.

The radioactive materials incident report data on file with DOT for the 14-year period 1971 to 1985 indicate that 167 transportation accidents occurred (mostly on highways), involving a total of 2,602 radioactive material packages. Only 67 of the packages involved experienced any release of contents. Close examination of those releases reveals that:

No Type B packages released their contents because of exposure to accident conditions of transport.[1] (Type B packages contain high amounts of radioactivity and therefore are required to survive severe accident conditions);

---

[1] NRC and DOT are reviewing a recent (January 1988) accident in which a radioactive source was released from a radiography device (Type B). The review includes an attempt to determine whether the release was due to accident conditions, improper shipping procedures, improper fabrication, or a combination of these or other factors.

Where there have been releases, Type A or Industrial type packages have been involved (such packages are limited in the amount of radioactivity contained, and therefore are not required to survive severe accident conditions).

The most serious of these events which have occurred involved three separate highway accidents involving truckloads of 55-gallon drums of uranium ore concentrate ("yellowcake") in Colorado (1977), Kansas (1979), and North Dakota (1985). In two accidents, speeding appeared to be the cause of truck overturn, and in the third, collision with a train occurred. In each accident, many of the drums were thrown from the vehicle and ruptured, releasing large amounts of yellowcake. Extensive cleanup campaigns were necessitated. However, health effects due to radioactivity were essentially nil, and in each case, ordinary industrial hygiene precautions were taken to prevent exposure to airborne radioactivity.

Mr. ANDERSON. Thank you very much, Mr. Thompson.

Mr. Mineta wanted to be here today to ask questions of the witness from the Nuclear Regulatory Commission. He has asked that his questions be submitted to Mr. Thompson, that the answers be submitted for the record, and Mr. Thompson, would you please see that the answers are submitted for the record? It is 2-plus pages. I was going to say an extensive list of questions. We will keep the record open. We would like to have them for the record.

Mr. THOMPSON. We will be pleased to do that.

[Questions submitted by Representative Mineta and responses from Mr. Thompson follow:]

RESPONSES TO CONGRESSMAN MINETA'S QUESTIONS

Responses to the questions are attached.

Question 1. As our temporary facilities become more crowded, will there be increased pressures to move nuclear materials around the nation? And, if so, how should these pressures be dealt with?

Answer. As present facilities become more crowded, utilities can consider several options, including: reconfiguration of spent fuel storage pools; disassembly of fuel bundles for consolidation of fuel rods in the pools; adding on-site capacity through use of dry storage modules; and transshipment to another reactor site owned by the utility. Any use of the transshipment option is expected to be very limited. The only away-from-reactor storage facility (the General Electric facility near Morris, Illinois) has essentially reached its storage capacity. Thus, pending availability of a monitored retrievable storage (MRS) facility that may be constructed by the Department of Energy or the disposal repository, most spent fuel will be stored at the reactor site where it is generated. Whatever options are selected, any transportation of these nuclear materials must be conducted in accordance with applicable safety regulations.

Question 2. Why should we increase the risk of an accident by moving nuclear materials around in a shell game?

Answer. NRC recognizes that there is an inherent risk in any transportation, including the transportation of nuclear materials. We have, however, evaluated the risks to public health and safety from nuclear materials transportation ("Final Environmental Statement on the Transportation of Radioactive Materials by Air and Other Modes," NUREG–0170) and determined that public safety is adequately protected under the existing regulatory system.

Question 3. Is there a policy, at the NRC or elsewhere, regarding the desirability or undesirability of moving of high-level nuclear material?

Answer. There is no policy at NRC that specifically addresses desirability or undesirability of moving high-level nuclear material. NRC is not aware of such a policy elsewhere. As noted in the response to Question 6, there is a need to transport spent nuclear fuel and high-level nuclear waste under the Nuclear Waste Policy Act. In transporting radioactive materials, NRC licensees must comply with applicable NRC and Department of Transportation regulations for the protection of public health and safety.

Question 4. Is there a process at the NRC for reviewing the need for a specific shipment or series of shipments? Do you feel there should be such a process?

Answer. There is no process at the NRC which specifically calls for the review of the need for a specific shipment or series of shipments. NRC has evaluated the risks of radioactive material shipments on a generic basis and determined that these risks are sufficiently small that need is not determined for each shipment.

Question 5. Are you aware of situations where materials have been shipped from one temporary facility to another while awaiting final storage? Would you be concerned about such situations?

Answer. We are aware of situations where materials have been shipped from one facility to another while awaiting final storage. For example, spent reactor fuel has been shipped from a former reprocessing facility in New York State to a storage facility in Illinois. Also, in a few cases, there have been spent fuel shipments from the storage pool at one reactor to the storage pool at another reactor, in the same utility system. While we are concerned about nuclear material transportation from the safety standpoint, given the results of our transportation risk analysis, we have concluded that the risk of such interim transportation is acceptably small.

Question 6. Do you feel that we need a national policy to deal with a determination of necessity of transporting high-level nuclear materials, specifically, nuclear wastes?

Answer. NRC believes that the national policy specifically established to deal with nuclear wastes (Nuclear Waste Policy Act of 1982) recognized the need for the transportation of these materials. We also note that in the amendments to the Nuclear Waste Policy Act of 1987, Congress established the Monitored Retrievable Storage (MRS) Commission to prepare a report on the need for a MRS facility as part of a nuclear waste management system. The MRS Commission is directed to include impacts of transportation in its report to Congress. At this time, we do not think that additional national policy in this area is warranted, from a health and safety perspective.

Mr. ANDERSON. My first questions are for Jim Makris. Jim, have all States established State Emergency Response Commissions?

Mr. MAKRIS. Yes, sir, and virtually every State established it by the legislative deadline. I now understand that because the executive order in the State of Louisiana which established their commission fails when there is a new Governor put into place, that they are now reestablishing their commission, but with the exception of this minor problem with Louisiana, all of them have been established. The National Governors Association—and I will leave with you this book—has put together a complete compendium of all of the State Emergency Response Commissions, their status, how they were established, and other activities regarding each of them at our request.

Mr. ANDERSON. Very good. Now you indicate that the EPA and other Federal agencies have encouraged Governors to include transportation representatives on the State Emergency Response Commissions. Are the Governors doing that?

Mr. MAKRIS. Twenty-seven Governors have already for sure done that, explicitly from Departments of Transportation. Other transportation issues are represented by public safety or highway patrol men also being on those commissions, so I think the final number would probably be in the mid-thirties, sir, that have done that. Also, Congress explicitly said that in the local emergency planning committees, transportation officials should be part.

Mr. ANDERSON. Now you say that the EPA trains about 5,500 students each year, over half of which are State and local personnel. My question is, What State and local personnel do you train and who pays for the training?

Mr. MAKRIS. The EPA makes available these courses. A total amount of $3.8 million has been spent annually to provide this training. Much of it is provided at our facility in Edison, New Jersey. Some of it is provided at our facilities in Cincinnati, OH.

We are now moving quickly toward a train-the-trainer concept, one that is long overdue in the business of hazardous materials training, and expect that through a series of 10 courses to be given in the next year, the possibility of training 5,000 employees will increase by an order or two of magnitude. We would expect through the delivery of these next series of courses, we will be in a position to perhaps see trained 50,000 people or so annually within 2 or 3 years.

Mr. **ANDERSON**. You may have answered it: Who pays for the training?

Mr. **MAKRIS**. The States and locals send their people.

Mr. **ANDERSON**. My next question is, how much does the training cost? Is that the $3.8 million?

Mr. **MAKRIS**. The $3.8 million is the amount we have budgeted annually for carrying out this program.

Mr. **ANDERSON**. Budgeted for that. How much does EPA spend on training?

Mr. **MAKRIS**. Totally, as an agency? I'm sorry, I don't really know what the broad training requirements, training budgets would be. I can say that in this area of hazardous materials, we not only do this particular training—which, as I said, we are trying to expand to include our train-the-trainers—but also working with FEMA and using their Emmitsburg facility and working with DOT in their facilities, I think we have a pretty good multiple. In terms of the total training budget of the EPA, I would have to provide you that number, sir.

Mr. **ANDERSON**. I think it would be beneficial if when you get back to the office, you could compile that just so we could answer the questions as to how much we are spending on training. I have no idea, and I think you would come closer than the rest of us.

[The following was received from Mr. Makris:]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 3 1988

OFFICE OF
EXTERNAL AFFAIRS

Honorable Glenn M. Anderson
Chairman, Subcommittee on Surface
  Transportation
Committee on Public Works and Transportation
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

At the May 25, 1988 hearing concerning Title III of SARA and Hazardous Materials Transportation, held by your Subcommittee, you requested that the Environmental Protection Agency provide information on Agency training costs. Enclosed are our responses for inclusion IN the hearing record, in the testimony of James Makris, Director, Preparedness Staff, Office of Solid Waste and Emergency Response.

If I can be of further assistance to the Subcommittee, please feel free to contact my office.

Sincerely,

A. Henry Schilling
Director, Office of
Legislative Analysis

Enclosures

Insert/Page 102

Response to Chairman Anderson's Question
From the May 25, 1988 Hearing

Question: How much does EPA spend on training?

Response: Data from EPA's Training Information System (TIS) shows the Agency's total training costs for FY 1987 at $3,097,791. This cost is based on information taken from the SF-182 (Request, Authorization, Agreement and Certification of Training) which must be completed by Agency employees for each training experience. Training data covers:

- All courses sponsored by the EPA Institute. (Institute sponsored courses are presented by EPA employees for EPA employees; no tuition is charged.)
- All tuition fees and externally purchased training products.

The data does not cover:

- Briefings or training sessions sponsored by specific program offices which cover changes in environmental regulations and are designed for State and local governmental personnel, or contractor and public industry personnel.
- Any other training costs which did not require the completion of a SF-182.
- Travel and per diem costs associated with attending training.
- Training staff salaries.

Also attached is a copy of EPA's Annual Report of Training Activities.

Mr. Harold Segal
Management and Oversight Division
TIG - Office of Training and Development
U.S. Office of Personnel Management
P. O. Box 7230
Washington, D.C. 20044

Dear Mr. Segal:

As requested in your December 15, 1987 memorandum, I am pleased to forward to you two copies of EPA's Annual Report of Training Activities for Fiscal Year 1987.

If you have any questions or need more information, please contact Elva Slagle of my staff on 382-2997.

Sincerely,

Clarence Hardy
Director of Personnel

Enclosures

cc: Clarence Hardy
Bill Henderson
Thomas Wyvill
Paul Newton

PM-212:ESLAGLE:475-8022:Rm3624WSM:SlagleDisc#8:Doc#30

PERSONNEL ENGAGED IN AGENCY TRAINING ACTIVITIES

AGENCY
Environmental Protection Agency

SUBELEMENT

FISCAL YEAR
FY 1987

PERSONNEL	EMPLOYEE DEVELOPMENT SERIES (GS-235 or Equiv.)		INSTRUCTORS		ADMINISTRATIVE AND CLERICAL SUPPORT PERSONNEL	
	Staff-Years	Total Salary Costs	Staff-Years	Total Salary Costs	Staff-Years	Total Salary Costs
1. Full-time Personnel	15.90	613,695	1.33	38,500	7.00	128,466
2. Part-time Personnel	4.00	112,861	0	0	5.10	102,127
TOTAL	19.90	726,556	1.33	38,500	12.10	230,593

1. Full-time Personnel

Full-time personnel are civilian personnel, including foreign nationals, whose duties consist entirely of activities directly related to training. Agencies are requested to report under the column "Staff-Years" their best estimate of the amount of time worked by these employees. (A staff-year equals 2087 hours in pay status by one employee.) Report under the column "Total Salary Costs" the total salaries of these personnel, rounded to the nearest dollar. Do not include benefits when computing salary costs.

2. Part-Time Personnel

Part-time personnel are defined as civilian personnel engaged at least 25% of the time (but less than full-time) in activities directly related to training. Please enter the number of staff-years devoted to training and the portion of the total salaries of these people attributed to this time. (A group of ten employees earning a total annual salary of $120,000 who devoted 50% of their time to training would be shown as 5.0 in the staff-year column and $60,000 in the total salary cost column.) Do not include staff-years and salary costs for informal on-the-job training trainee time, or supervisory time devoted to selection, evaluation or counseling of trainees. Again, do not include benefits when computing salary costs.

LONG-TERM TRAINING

SECTION 4113(b)(2)
of Title 5, United States Code

A. Agency code (agency, subelement and submitting office number)

B. OFFICE USE ONLY ☒

C. Date of Report: 2/88

1. Employee's name (Last, First, Middle initial): SERAYDARIAN, Harry

Enter first 5 letters of last name: SERAY

2. Social Security Number: 195-36-4416

3. Date of Birth (Year and month) (example born January 14 1943 shown as 43/01): 47/01

4. The person named above (NOT a student in a work study program) received more than one hundred twenty (120) days of training as indicated by, in or through a non-Government facility during the Fiscal Year. Fiscal Year → 1987

5. Position title/function: Director, Toxics & Waste Division

Grade: ES-02

Series:

6. Reporting Department or Agency and Location (including ZIP Code):
U.S. Environmental Protection Agency
Region 9,
215 Fremont St.
San Francisco, CA 94105

7. Primary duties:

Employee Manages the Toxics and Waste Programs in the Region. This involves interaction with States and local government personnel, other Federal Agencies and private industry.

8. Employee's duty station at time of assignment to training: San Francisco, California

9. Degree Received:

10. Training period (6 digits)	Year	Month	Day	11. No. of course hours (4 digits)	
a. Start	86	09	15	a. During Duty	180 da
b. Complete	87	06	05	b. Non-duty	0
				c. Total →	180 da.

12. Training codes (See instructions)

a. Purpose		c. Source	6
b. Type		d. Special interest	

13. Title and brief description of training course:

Harvard University's Mid-Career Program in Public Administration

COSTS

14. Direct costs

Item	Amount Dollars
a. Tuition	$ 10,440.00
b. Books or materials	650.00
c. Other (Specify) Man. Fees	440.00
d. (enter 4 digits in dollar column) TOTAL →	$ 11,530.00

15. Indirect costs

Item	Amount Dollars
a. Travel	$ 400.00
b. Per Diem	6,000.00
c. Other (Specify)	
d. (enter 4 digits in dollar column) TOTAL →	$ 6,400.00

16. State briefly the relationship of the contents of the training to the employee's official duties:

The employee manages the very visible, highly sensitive toxics and waste management program areas in the Region. He must deal with other Federal, State and local government areas, plus private industry, and environmental groups. This training provides a better focus and analytical techniques to overcome problems in making and implementing environmental policy and a better understanding and appreciation of the impact that interpersonal behavior has on success or failure in selling these programs.

17. Name and location of training facility (Identify each facility, group, or person providing training):
Harvard University
John F. Kennedy School of Government
79 John F. Kennedy St.
Cambridge, MA 02138

LONG-TERM TRAINING

SECTION 4113(b)(2)
of Title 5, United States Code

A. Agency code, agency subelement and submitting office number (example—XX-XX-XXXX)
EP-18-3248

B. OFFICE USE ONLY ☒

C. Date of Report

1. Employee's Name (Last, First, Middle initial)
RICE, Eugene W.

Enter first 5 letters of last name
RICE

2. Social Security Number
283-42-7565

Date of Birth (Year and month) (example born January 14, 1943 shown as 43/01)
49/02

4. The person named above (NOT a student in a work study program) received more than one hundred twenty (120) days of training as indicated by, in or through a non-Government facility during the Fiscal Year.
Fiscal Year ⟶ 87

5. Position title/function
Microbiologist

Grade
12

Series
403

6. Reporting Department or Agency and Location (including ZIP Code)
EPA, WERL, DWRD,
Microbiological Treatment Branch

7. Primary duties
Research drinking water.

8. Employee's duty station at time of assignment to training
Cincinnati, Ohio

9. Degree Received

10. Training period (6 digits)

	Year	Month	Day
a. Start	86	10	21
b. Completed	87	08	28

11. No. of course hours (4 digits)

a. During Duty	0710
b. Non-duty	
c. Total ⟶	0710

12. Training codes (See instructions)

a. Purpose	13	c. Source	6
b. Type	23	d. Special interest	11

13. Title and brief description of training course
Environmental Engineering Program
(See attached listing of courses)

COSTS

14. Direct costs

Item	Amount Dollars
a. Tuition	$ 4736
b. Books or materials	164
c. Other (Specify)	
d. (enter 4 digits in dollar column) TOTAL ⟶	$ 4800

15. Indirect costs

Item	Amount Dollars
a. Travel	$
b. Per Diem	
c. Other (Specify)	
d. (enter 4 digits in dollar column) TOTAL ⟶	$

16. State briefly the relationship of the contents of the training to the employee's official duties.
Will strengthen research being done in support of drinking water regulations.

17. Name and location of training facility (identify each facility, group, or person providing training)
University of Cincinnati
Cincinnati, Ohio

Introduction Physical Geology
Physical Geology Lab
Env. Virology
Env. Engineer Seminar
Env. Chem. II
Water Pollution Control
Env. Instrumentation
Solid Waste Analysis
Doctoral Dissert. Research
Intro. to Statistical Methods
Hazardous Waste Disposal

Page ________ of ________

CONTRIBUTIONS and AWARDS

Agency Environmental Protection Agency	Agency location (Include ZIP Code) 401 M Street, SW Washington, DC 20460
Fiscal year 1987	

INSTRUCTIONS

Report in duplicate on OPM Form 1307 all employees who received contributions and awards incident to training in non-Government facilities. This report is required by section 4113(b)(3) of Title 5, United States Code and by section 410.901(b)(3)(ii) of Title 5, Code of Federal Regulations. Section 410.901(b)(3)(ii) pertains to those contributions and awards from non-Federal organizations in connection with training that employees receive in non-Government facilities either (a) partially or wholly during periods they are on duty, or (b) at such times as their Departments pay part or all of the expenses of such training.

Last Name (List in alphabetical order)	First	Middle Initial	Award Title	Dollar Value of Award	Name and Address of Organization Selecting Recipient and Administering Award
			NOT APPLICABLE		

OPM Form 1307 (1-79)
Office of Personnel Management

U.S. OFFICE OF PERSONNEL MANAGEMENT

STATISTICAL SUMMARY OF TRAINING DATA

(Please Read Instructions Before Completing)

IDENTIFYING INFORMATION

Name of Agency U.S. Environmental Protection Agency	Fiscal Year of Report 1987
Agency Contact Person (Name and Office) Elva W. Slagle, Personnel Management Division	Telephone (Include Area Code) (202) 382-2997

I—SUMMARY OF TRAINING INSTANCES AND HOURS

A. Training Source	SHORT-TERM		LONG-TERM	
	B. Number of Instances	C. Number of Hours	D. Number of Instances	E. Number of Hours
1. Internal	5,411	108,220	0	0
2. Interagency/Interservice	2,723	70,798	0	0
3. College/Professional Assoc./Non-Profit	2,681	80,430	2	2,150
4. Private/Other	5,326	106,520	0	0
5. Total	16,141	365,968	2	2,150

II—PROPORTIONAL DISTRIBUTION OF TRAINING

A. Position Level of Employee	B. Total Number of Employees in Agency	C. Total Number of Employees Trained (Short-Term)	D. Total Training Instances (Short-Term)	E. Total Training Hours (Short-Term)
1. Executive	236	146	242	6,534
2. Manager and Supervisor	1,977	1,323	2,017	54,030
3. Non-Supervisor	13,285	6,643	13,882	305,404

III—TRAINING COSTS

A. Itemized Expenses	GOVERNMENT		NON-GOVERNMENT		F. TOTALS
	B. Training Source Internal	C. Training Source Interagency/Interservice	D. Training Source College/Professional Association/Non-Profit	E. Training Source Private/Other	
Trainee Expenses					
1. Travel/Per Diem	185,976	108,486	201,474	309,960	805,896
2. Tuition/Other	216,972	635,418	836,892	1,084,860	2,974,142
Agency Expenses					
3. Externally Purchased Products/Services	8,826	9,500	9,100	96,154	123,580
4. Staff Salaries (From OPM Form 1166)					995,649
5. Other Agency Training Costs					25,370

IV—CONTINUED SERVICE AGREEMENTS

The reporting agency is required to furnish the number of employees failing to fulfill their obligations under continued service agreements and the action taken to recover additional expenses (e.g., waiver granted and for what reason). See FPM Chapter 410, Section 5-7, for further explanation.

Number of Employees Failing to Meet Obligation None

Actions Taken to Recover Expenses

REPRODUCE LOCALLY

OPM Form 1524 (3/84)

V—NARRATIVE SUMMARY (Brief Responses Requested)

1. Please indicate the general thrust of training within your agency, including the major types of training which take place and the major employee populations addressed, for example, maintenance training for data processors, state-of-the-art training for scientists, entry-level and advanced training for auditors. If no change has occurred from the previous year, please repeat response from before.

The general thrust of EPA's employee development and training effort was focused heavily on supervisory and management development, skill and maintenance training for professional and clerical employees in data processing areas, general skills (writing, grammar, proofreading, interpersonal communications, etc.) for secretaries and support staff, retirement benefits under FERS, state-of-the-art science, engineering technology, and health and safety courses such as basic field safety, general and advanced laboratory safety, CPR, First Aid and defensive driving.

2. Please indicate any major changes or new initiatives in the general thrust of training within your agency, whether one-time or continuous, for example, retraining clerical personnel in office automation processes, on an agency- or bureau-wide basis, training large numbers of new air traffic controllers, training inspectors to review agencies' implementation of new safety regulations, training all supervisors in interpersonal skills.

New initiatives this fiscal year were (1) the development and piloting of a four-day survival skills course for secretaries new to the Agency, (2) courses in office automation concepts for secretaries and support staff which covered such areas as changes in boss/secretary relationship, present and future automated equipment that can be found in the office, and ergonomics to relieve stress associated with using video display terminals. (3) Major, time effort and funds were expended to establish mandatory requirements for and develop course materials to meet the requirements for training the Agency's compliance inspectors/investigators. Piloting of the completed program is expected during FY 1988.

3. Describe briefly any economic savings brought about by training, or other types of beneficial outcomes. This might include reductions in staff requirements or in processing time for a program, reductions in employee turnover or improvements in safety, or improved service to the public. Provide concrete but brief examples.

Continued emphasis on the EPA institute concept of providing inhouse training and the expansion of the concept to selected regions has allowed the Agency to provide relevant, cost effective training without a significant increase in budget. This concept has also resulted in the development of employees with specific technology expertise to serve as internal consultants and instructors.

Mr. **Anderson**. Now do you think there is a need to improve training for State and local emergency response personnel?

Mr. **Makris**. Yes, sir. There is a great need to increase the amount of training but there is also a great deal going on that is not necessarily provided by us. In Title 3, when it created this new relationship between industry and the local community, if you will, by demanding exchanges of information and demanding some very up-front discussions of what risks are and what chemicals are, has started a process by which there is a lot of interest in the training.

For example, just this week 600 people were involved in a major conference in Chicago dealing with hazardous materials. There were a good many State and local people there at that time. On the 8th, 9th, and 10th of June, the National Governors Association is sponsoring a major meeting with all State Emergency Response Commission chairmen and 40 local emergency planning committees, where we will be dealing exactly with what the training requirements are, and this in fact constitutes some training in itself.

Even as we speak, there is a teleconference going on on FEMA's ENET, dealing with health professionals and their jobs in dealing with hazardous materials transportation, so I think there is a great deal going on which is not included in the $3.8 million. There is a lot being generated by the public sector, by the private sector, by State and local governments. There is a lot being generated by organizations like the American Institute of Chemical Engineers' Centers for Chemical Process Safety, and there is a lot coming from organizations like health organizations. If you would like, we will try to come to grips with that as well in these numbers you have asked for.

Mr. **Anderson**. I would appreciate that.

[The following was received from Mr. Makris:]

Provided herewith is the Digest of Federal Training in Hazardous Materials, developed by the Federal Emergency Management Agency which will provide a fairly thorough description of federal training activities open to the states and local officials. In addition, some training activities have been undertaken by the National Oceanic and Atmospheric Administration in the use of CAMEO (Computer Aided Management of Emergency Operations), and the Department of Defense provides state and local training during emergency plan exercises.

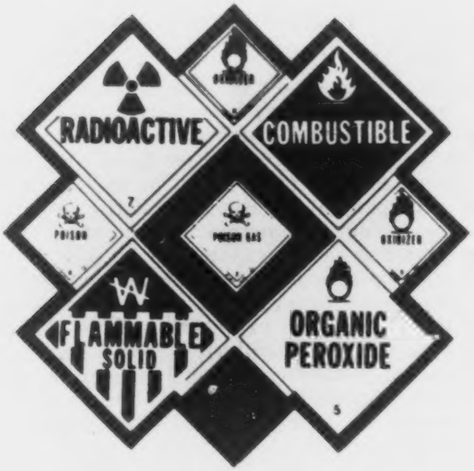
Emergency preparedness and response training is also provided by many states through their fire services, emergency management agencies, Departments of Transportation, Environment or Natural Resources agencies, and Occupational Safety Offices, as well as universities and extension services of the states. The states of California and New Jersey have particularly strong training programs.

In the private sector, numerous chemical companies, such as Dupont and Monsanto provide courses in responding to accidents and in planning and prevention. There are also private consulting firms such as the Executive Enterprise Institute providing these types of training courses.

Finally, professional and trade associations such as the American Institute of Chemical Engineers, the American Society of Safety Engineers, the American Industrial Hygiene Association, the International Association of Fire Chiefs are also providing numerous training opportunities in this state.

FEMA 134 / July 1987

DIGEST OF FEDERAL TRAINING IN HAZARDOUS MATERIALS


RADIOACTIVE
7
OXIDIZER
COMBUSTIBLE
POISON
POISON GAS
OXIDIZER
FLAMMABLE SOLID
ORGANIC PEROXIDE
5

Provided by the FEDERAL EMERGENCY MANAGEMENT AGENCY

INTRODUCTION

The Digest of Federal Training Programs in Hazardous Materials provides information on Federal training in hazardous materials. The need for this type of information was identified by participants in the National Workshop on Hazardous Materials Training, held at the National Emergency Training Center (NETC) in April 1985. Workshop participants based their recommendations for the development of this Digest on the current limited awareness of many state and local officials and private sector managers and executives of the Federally-conducted or sponsored hazardous materials training activities.

The Digest is divided into three sections to facilitate the use of its information. Section I contains a list of Federal activities, in hazardous materials training, by agency name.

Section II contains descriptions of these activities including (1) agency offering the course, (2) target audiences and selection criteria, (3) duration of course, (4) scope and content, (5) methodology/presentation modes, (6) prerequisites, (7) scheduling and delivery, and (8) agency contacts.

Section III is an appendix containing addresses and telephone numbers of individuals or offices who may be contacted for further information regarding the hazardous materials training offered by each Federal agency.

The Federal Emergency Management Agency (FEMA), in its Federal role of coordinating and providing a focus for emergency preparedness training, agreed (with the National Response Team (NRT)) to identify, assemble, print and distribute this Digest on behalf of the several involved agencies. An interim version was distributed for use and comment in October 1986: This edition reflects an information update as of May 1987 and reflects comments submitted on the interim version. FEMA intends to update and reprint the Digest in the Spring of 1989.

This is the first formal printing of the Digest. The Office of Programs and Academics in FEMA's Training and Fire Directorate is seeking your comments and soliciting appropriate additional entries.

SECTION 1 - HAZARDOUS MATERIALS DIGEST

TRAINING ACTIVITY LIST BY AGENCY

AGENCY NAME PAGE

DEPARTMENT OF ENERGY (DOE)

Radioactive Material Transportation Basic Workshop 2-40
Radioactive Material Orientation Seminar 2-41
Medical Planning and Care in Radiation Accidents 2-37
Health Physics in Radiation Accidents 2-38
Handling of Radiation Accidents by Emergency Personnel 2-39

DEPARTMENT OF LABOR/OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (DOL/OSHA)

Hazardous Materials 2-43
Fire Safety Principles 2-44

DEPARTMENT OF TRANSPORTATION

Hazardous Materials Compliance and Enforcement 2-45
A Trainer's Course for Hazardous Materials Safety Compliance and Enforcement 2-47

DEPARTMENT OF TRANSPORTATION/U.S. COAST GUARD (DOT/USCG)

On-Scene Coordinator/Regional Response Team Exercises 2-48
On-Scene Coordinator/Local Response Team Training/Exercise 2-48
National Strike Force Training 2-48

DEPARTMENT OF TRANSPORTATION/Transportation Safety Institute (DOT/TSI)

Cargo Tank Compliance and Enforcement Course 2-46

AGENCY NAME PAGE

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Personnel Protection and Safety (165.2) 2-3
Incident Mitigation and Treatment Methods (165.3) 2-4
Air Surveillance for Hazardous Materials (165.4) 2-5
Hazardous Materials Incident Response Operations (165.5) 2-6
Environmental Risk Assessment (165.6) 2-7
Introduction to Ground-Water Investigation (165.7) 2-9
Response Safety Decision-Making Workshop (165.8) 2-10
Sampling for Hazardous Materials (165.9) 2-11
Hazardous Materials Response for First Responders (165.15) 2-12

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Hazardous Materials Contingency Planning Course 2-14
Analysis of Hazardous Materials Emergencies for Emergency Program Managers 2-15
Integrated Emergency Management Course: Hazardous Materials 2-16
Emergency Management U.S.A. 2-17
Hazardous Materials: The Pesticide Challenge 2-18
Hazardous Substance Specialist 2-19
Hazardous Materials Incident Analysis 2-20
Recognizing and Identifying Hazardous Materials 2-21
The Chemistry of Hazardous Materials 2-22
Hazardous Materials Tactical Considerations 2-23
Fundamentals Course for Radiological Monitors (FCRM) 2-26
Fundamentals Course for Radiological Response Teams (FCRRT) 2-27
Fundamentals Course for Radiological Officers (FCRO) 2-28
Radiological Monitor Instructor Course (RMIC) 2-29
Radiological Officer Refresher Course (RORC) 2-30
Radiological Monitoring Refresher Course (RMRC) 2-31

AGENCY NAME	PAGE
FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) (Cont.)	
Radiological Response Team Refresher Course (RRTRC)	2-32
Hospital Emergency Department Management of Radiation Accidents	2-33
Radiological Emergency Preparedness Planning Course	2-34
Radiological Officers Train-the-Trainer (Radiological Instructor Course III)	2-35
Radiological Emergency Response Course	2-36
NUCLEAR REGULATORY COMMISSION (NRC)	
Protective Action Decision Making and the Role of Dose Assessment	2-42

SECTION 2: HAZARDOUS MATERIALS DIGEST

ENVIRONMENTAL PROTECTION AGENCY TRAINING

OFFICE OF EMERGENCY AND REMEDIAL RESPONSE

HAZARDOUS MATERIALS INCIDENT RESPONSE TRAINING PROGRAM

The Office of Emergency and Remedial Response is responsible for the U.S. Environmental Protection Agency's program for responding to the release or potential release of hazardous chemicals. To prevent or reduce the impact of the release on public health and the environment, emergency actions and longer-term remedial activities are often necessary.

As part of a comprehensive program for protecting the public and the environment from chemical incidents resulting from vehicle or train accidents, spills, discharges from industrial operations, and hazards associated with uncontrolled waste sites, the Environmental Response Branch, Emergency Response Division, develops and presents training courses in safety and technical operations related to hazardous material responses.

The courses presented by the Environmental Response Branch last from 3 to 5 days. They provide participants with fundamental information about the subjects covered. Although each course is tailored to cover technical material relevant to the course title, no course will provide participants with exhaustive treatment of any subject. Complemented by work experience and individual effort, they do provide a foundation for developing knowledge and skills in a variety of response activities. All courses emphasize the practical application of instructional material through problem-solving, case studies, demonstrations, and exercises.

These courses are available to response personnel from federal, state, and local agencies at no charge. Private industry may also attend on a space available basis and payment of tuition. Persons required to pay tuition should not submit checks until notified of acceptance into courses.

There are no prerequisites for attending any course with the exception of Response Safety Decision-Making (165.8) which requires that attendees have experience in response safety. Persons wishing to attend both Personnel Protection and Safety (165.2) and Hazardous Materials Incident Response Operations (165.5) should discuss this with the registrar as there is some redundancy.

Applications to attend any course should be made as early as possible. Selection of students for Hazardous Materials Incident Response Operations (165.5) and Hazardous Materials Response for First Responders (165.15) are made five weeks before the starting date of the course. Students must receive notification of acceptance from the registrar before attending courses presented in Cincinnati, Ohio or Edison, New Jersey. The Office Hours are: 7:00 - 3:30 EST.

Applications to attend or inquiries concerning availability of space in courses scheduled in locations other than Edison or Cincinnati should be directed to the listed Regional Contact.

Title: PERSONNEL PROTECTION AND SAFETY (165.2)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course. This course is for relatively inexperienced personnel who respond to accidents involving hazardous substances or investigate uncontrolled hazardous waste sites. It provides basic information on the protection and safety of personnel engaged in field operations dealing with hazardous substances.

Duration of Course: Five days

Scope and Content: Concepts, principles and procedures for personnel protection in hazardous substance accidents or uncontrolled hazardous waste sites; fundamentals of respiratory protection; types of respiratory protection equipment; protective clothing; air monitoring; safety procedures for response operations.

Methodology/Presentation Modes: Approximately 1/2 of course is standard classroom instruction that includes problem solving and discussion; about 1/2 of course is hands-on use of equipment, instruments, via outdoor exercises. Segments of this course require the wearing of respiratory equipment which precludes the use of glasses. Students who are severely restricted without glasses should be aware that their participation may be limited unless they have their own spectacle-equipped respirators.

Prerequisites: None. Continuing Education Units: 2.1; ABIH Certification Maintenance Credits: 2.0; Tuition: $110.00

Scheduling and Delivery: This course is delivered 18-22 times per year by EPA contract instructor teams. The EPA regional offices determine participation and course locations. Portions of this course and course 165.5 are redundant. Persons considering application to both courses should confer with the Registrar.

Agency Contact: Nearest EPA Regional Office

Title: INCIDENT MITIGATION AND TREATMENT METHODS (165.3)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course. This course instructs attendees in the concepts and techniques for containment, treatment and disposal of hazardous materials associated with accidental releases and uncontrolled waste sites. It emphasizes the practical applications of incident mitigation and treatment technologies.

Duration of Course: Four days

Scope and Content: Theories that govern chemical, physical, and biological behavior; phenomena that affect treatment processes, first response considerations; hazard evaluation; containment methods; physical, chemical, and biological treatment; disposal options and response operation safety; tracking and recovering contaminants in groundwater; regulatory requirements.

Methodology/Presentation Modes: Approximately 1/2 standard classroom setting with lecture presentations, and 1/2 case presentations and instructor-led problem solving and discussions. Does not emphasize hands-on use of equipment. Calculators needed.

Prerequisites: None. Continuing Education Units: 3.7; ABIH Certification Maintenance Credits: 2.0; Tuition: $88.00.

Scheduling and Delivery: This course is delivered 10 times per year (approximately one each) in the EPA regions (approximately one per region) by EPA contract instructor teams. The EPA regional offices determine participation and course locations.

Agency Contact: Nearest EPA Regional Office

Title: AIR SURVEILLANCE FOR HAZARDOUS MATERIALS (165.4)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course. It is designed for personnel involved in emergency response to hazardous substances or those who investigate uncontrolled hazardous waste sites.

Duration of Course: Five days

Scope and Content: Air surveillance programs; air monitoring techniques and instruments; air sampling techniques and equipment; radiation detection instruments; calibration; quality control; exposure guidelines; health and safety considerations; legal implications; air dispersion methodology; instrument operations; surveillance strategies for both sites and hazardous chemical releases.

Methodology/Presentation Modes: Approximately 1/2 lecture and facilitated classroom problem solving and analysis; 1/2 field activities using equipment and instruments. Very intensive equipment usage. Calculators are recommended.

Prerequisites: None. Continuing Education Units: 1.7; ABIH Certification Maintenance Credits: 2; Tuition: $110.00.

Scheduling and Delivery: This course is delivered 10-12 times per year in the EPA regions (approximately one per region) by EPA instructor teams. The EPA regional offices determine participation and course locations.

Agency Contact: Nearest EPA Regional Office

Title: HAZARDOUS MATERIALS INCIDENT RESPONSE OPERATIONS (165.5)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course. This course provides attendees with practical knowledge concerning incident response operations. The course focuses on response team function, methods, peocedures, and safety in responding to hazardous substances spills or abandoned waste sites.

Duration of Course: Five days

Scope and Content: Respiratory protection apparatus, protective clothing, field monitoring instruments, hazard analysis, toxicology, response organization; standard operating safety guides; actual field responses to realistic situations for sites and spill accidents. After completing the course, attendees should be more familiar with selection, use, and limitation of respiratory protection apparatus and protective clothing; site entry, control, and decontamination procedures; the use of field monitoring instruments; and response organization and management.

Methodology/Presentation Modes: About 1/3 lecture in class; remaining 2/3 is hands-on use of equipment and working in response operations as teams on realistic vehicular accident or abandoned waste site situation. Segments of this course require the wearing of respiratory equipment which precludes the use of glasses. Students who are severely restricted with-out glasses should be aware that their participation may be limited unless they have their own spectacle-equipped respirators. Portions of this course and 165.2 are redundant. Persons considering application to both courses should confer with the Registrar.

Prerequisites: None. Continuing Education Units: 2.1; ABIH Certification Maintenance Credits: 2.0; Tuition: $110.00.

Scheduling and Delivery: This course is conducted by EPA instructors approximately 50 times per year at one of two training centers (Edison, N.J., or Cincinnati, Ohio). Participation and scheduling are determined by the EPA Training Center.

Agency Contact:
Thomas C. Sell or Ellery D. Savage
U.S. Environmental Protection Agency
26 West St. Clair Street
Cincinnati, Ohio 45268

Ph: (513) 569-7537

Title: ENVIRONMENTAL RISK ASSESSMENT (165.6)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course.

Duration of Course: Four days

Scope and Content: Provides participants with the fundamentals to determine the toxicity of chemicals that have been released into the environment and to assess their risk to public health. The focus is on risk assessment associated with uncontrolled hazardous waste sites. While some aspects of the course are related to emergency response and other environmental contamination problems, most of the discussion and problem-solving applies to long-term activities. The course addresses risk assessment in terms of its four elements: hazard identification, dose-response evaluation, exposure assessment and risk characterization. Specific concepts will be discussed according to the general risk assessment protocol used by the U.S. EPA. Hazard identification consists of: fundamentals of toxicology, toxic properties associated with chemical groups, and factors which influence the mobility of chemicals in the environment. The segment entitled, dose-response evaluation, deals with the interpretation of laboratory data, epidemiology studies, and exposure guidelines. The exposure assessment element includes: identification of populations at risk, pathways of dispersion, estimates of chemical intake through various routes of exposure and a brief description of environmental models. Risk characterization incorporates all of the above information to determine the impact upon public health. The Superfund Public Health Evaluation is presented as a specific application of all elements of risk assessment. This process was developed by EPA as a framework for public health assessments at Superfund sites.

Methodology/Presentation Modes: Approximately 1/2 lecture and 1/2 hands-on problem solving either in groups or individually depending on the instructor and specific case problems. Upon completion of the course, participants will be able to review basic toxcity data, to estimate exposure for various pathways of diepersion, to compare site data to exposure guidelines, and to adapt these concepts to site-specific risk assessment. Calculators are recommended.

Prerequisites: None. Continuing Education Units: 1.5; ABIH Certification Maintenance Credits: 2.0; Tuition: $88.00.

Scheduling and Delivery: The course is delivered 10 times per year in the EPA regions (one per region) by EPA instructors.

Agency Contact: Nearest EPA Regional Office

Title: INTRODUCTION TO GROUND-WATER INVESTIGATIONS (165.7)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course.

Duration of Course: Three days

Scope and Content: This introductory course is designed to provide attendees with fundamental knowledge concerning groundwater. It is intended for personnel with little prior training in the subject of ground-water, but who may be concerned with ground-water contamination due to accidental releases of chemicals or contamination from abandoned hazardous waste sites. The course focuses on ground-water investigation, monitor-well placement, well construction and the collection of samples. Topics to be discussed include: ground-water hydrology, ground-water pollution, monitor well placement, well construction, sampling, legal considerations, and quality control/quality assurance. After completing the course atendees should be more knowledgeable about the basic characteristics of ground-water flow; chemical, physical and biological factors affecting ground-water contamination; design of ground-water monitoring networks; monitor well construction; groundwater sampling; and ground-water restoration.

Methodology/Presentation Modes: Instruction methods used are lectures, group discussion, case-studies, and class problem-solving.

Prerequisites: None. Continuing Education Units: 1.8; Tuition: $66.00

Scheduling and Delivery: The course is delivered by EPA contract instructor teams. The EPA regional offices determine participation and course locations.

Agency Contact: Nearest EPA Regional Office

Title: RESPONSE SAFETY DECISION-MAKING WORKSHOP (165.8)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: Experienced Federal, State, and local responders.Participants are selected by regional offices, with emphasis on experienced attendees.Participants must be knowledgeable in basic personnel protection, safety, and response operations. This course is for persons developing, implementing, or managing safety programs for chemical emergencies or cleanups at hazardous waste sites. The course complements other U.S. EPA basic safety courses and provides participants with more detailed guidance for making effective safety decisions. It is intended as a forum for participants and the staff to exchange information and ideas on response-related safety topics.

Duration of Course: Four days

Scope and Content: Safety guidance and regulations; risk assessment; air monitoring; respiratory and protective clothing selection; special problems; site safety plan and development. After this course attendees will better understand the responsibilities and liabilites of a response safety officer; be more familiar with the requirements for an overall health and safety program; be more knowledgeable in risk assessment and its impact on safety planning; be better trained in technical areas of response safety; and be better able to develop and implement site-specific safety plans.

Methodology/Presentation Modes: Workshop format. Uses about 1/2 lecture/presentations; about 1/2 group and workshop format. No hands-on activities.

Prerequisites: Personnel Protection and Safety or Hazardous Materials Incident Response Operations or related training; must demonstrate knowledge/experience. Individuals applying for the course are expected to be knowledgeable in basic personnel protection, safety, and response operations. As a minimum applicants must have attended Personnel Protection and Safety (165.2) or Hazardous Materials Incident Response Operations (165.5), similar courses, or demonstrate they are experienced in response safety. Continuing Education Units: 1.5; ABIH Certification Maintenance Credits: 2.0; Tuition: $66.00.

Scheduling and Delivery: This course is conducted six to eight times per year on a regional basis, by EPA instructional teams. It is not conducted in every region each year.

Title: SAMPLING FOR HAZARDOUS MATERIALS (165.9)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: The primary audiences for this course are Federal, State, and local responders including health, police, fire and others. Specific levels within agencies vary from department heads down to second level. Selection criteria are broad. Private sector representatives may also be eligible for this course. This course provides personnel, with no or minimal sampling experience, practical information for effectively sampling hazardous materials. The course focuses on the types of equipment suitable for hazardous materials sampling and procedures for safety collecting samples. Air sampling procedures are specifically treated in the Air Surveillance for Hazardous Materials (165.4) course, and are not covered in this course.

Duration of Course: Three days

Scope and Content: Sampling plan development; statistical basis for sampling; equipment and procedures for sampling containerized materials; surface water/lagoons; sediments/sludges; soils and groundwater; compatibility testing; sample shipment; safety in sample collection; quality control and assurance considerations. After completing the course, attendees should be more knowledgeable about the design of sampling programs; the equipment and procedures for sample collection; sampling safety; the regulations on transporting samples; and the use of statistics in sampling.

Methodology/Presentation Modes: Approximately 3/4 lecture and similar presentations, 1/4 hands-on using equipment. Calculators are recommended.

Prerequisites: None. Continuing Education Units: 2.0; Tuition: $66.00

Scheduling and Delivery: This course is delivered approximately 10-12 times per year through the EPA regions, by EPA instructional teams.

Agency Contact: Nearest EPA Regional Office

Title: HAZARDOUS MATERIALS RESPONSE FOR FIRST RESPONDERS (165.15)

Agency Offering Course: U.S. Environmental Protection Agency (EPA)

Target Audiences: This course provides those personnel first-on-the-scene, with basic information needed to recognize, evaluate, and mitigate an incident involving the release or potential release of hazardous materials. Its intended audience is members of hazardous material response teams, teams that are being formed, or others who may be called upon to respond to a chemical release.

Duration of Course: Five days

Scope and Course: The focus of the course is on recognizing and evaluating a hazardous materials incident, response organization, protecting response personnel, response resources, basic mitigation methods, and decision-making. Fire fighting techniques are not part of the course. Topics to be discussed include: chemical and physical properties of hazardous materials; toxicology; recognition and identification of hazardous materials; personnel protective equipment; direct-reading instruments; standard operating procedures; response organizations; and sources of information. After completing the course attendees will be more knowledgeable about response organization, response operations, personnel safety, equipment and instruments, resources, and mitigation methods.

Methodology/Presentation: Instructional methods used are lectures, class problem-solving, and exercises. Emphasis is on the hands-on-use of equipment and exercises for practically applying lecture information. Attendees will participate in two simulations designed to apply and test the lessons learned during the work.

Prerequisities: Persons who have previously attended the course Hazardous Materials Incident Response Operations (165.5) or Personnel Protection Safety (165.2)should not apply for this course. Continuing Education Units: 2.6; ABIH Certification Maintenance Credits: 2.0; Tuition: $110.00.

Scheduling and Delivery: This course is conducted by EPA instructional teams. The EPA regional offices determine participation and course locations.

Agency Contact: Nearest EPA Regional Office

FEDERAL EMERGENCY MANAGEMENT AGENCY

Through the Emergency Management Institute (EMI) and the National Fire Academy (NFA), the spectrum of topics in hazardous materials training are integrated and coordinated for FEMA.

Since the spectrum of hazardous materials training topics is broad, and there is a corresponding wide range of trainees, FEMA offers a comprehensive curriculum. EMI assumes the lead role in community policy formulation, planning and awareness courses and simulation exercises. The bridge in course delivery between the two schools is "hazardous materials strategy". The NFA assumes the lead role in chemistry, technical, tactical response and community "Right to Know" training. The EMI concentrates on a multi-hazard approach to planning that includes hazardous materials topics. These topics are incorporateed in an innovative way so that hazardous materials subjects are integral to courses in community planning and hazard assessment. Instruction includes exercises where coordination becomes the benchmark for tactical response personnel and strategic personnel. Radiological materials are considered within the definition of hazardous materials instructional activities.

Generally, anyone involved in emergency management can participate in resident and nonresident FEMA training activities. Applicants must, however, meet the selection criteria included with each course description in the catalog. Selection may also be based on pre-course testing and on the following consideration: The **impact** the applicant will have on emergency preparedness in their work place, the **utilization** potential of acquired skills, and the **distribution** that the applicant represents within the total emergency management community.

FEMA selects applicants for courses without regard to race, color, religion, sex, national origin, handicap, or age. All agencies nominating or approving applicants who wish to attend courses shall comply with Title VI of the Civil Rights Act of 1964; Section 504 of the Rehabilitation Act of 1973, as amended; the Age Discrimination Act of 1975; and regulations promulgated thereunder.

Application for admission to NETC is made on FEMA Form 75-5, General Admission Application. Forms can be obtained from State or local emergency management offices. For special courses and activities, such as prototype courses, programs for special audiences, and courses in which security clearances are required, special application procedures may be required.

Title: HAZARDOUS MATERIALS CONTINGENCY PLANNING COURSE

Agency Offering Course: Federal Emergency Management Agency / Environmental Protection Agency (FEMA/EPA)

Target Audiences: Open to all officials responsible for public policy and strategic planning and response to hazardous materials emergencies. Applicants should represent local, State, or federal governments as well as the fire service, law enforcement, community planners, public works departments, health and environmental organizations.

Duration of Course: Five days

Scope and Content: A one-week course for emergency management personnel responsible for hazardous materials planning and coordination. The course has two parts: Part A - Emergencies including transportation, use, storage, and disposal of hazardous materials; Part B - Episodic releases of air toxic chemicals from fixed-site facilities. Emphasis is placed on interagency cooperation and the identification of technical assistance available. Successful resolution of hazardous materials emergencies is a shared responsibility. Topics include local, State, and Federal mechanisms to assist in planning and response. Other topics include tactical requirements, hazardous materials characteristics, and regulatory compliance.

Methodology/Presentation Modes: A combination of lectures and group planning exercises. This course must be taught by EMI qualified trainers. To become a qualified instructor, contact your State Emergency Mangement Agency. Successful nomination by the State and successful completion of the EMI resident train-the-trainer is required.

Prerequisites: None

Scheduling and Delivery: This course is delivered by the States through the EMI field program.

Agency Contact: Contact the State Emergency Management Office Training Officer or the FEMA Regional Office for your area, or:

Emergency Management Institute
National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: ANALYSIS OF HAZARDOUS MATERIALS EMERGENCIES FOR EMERGENCY PROGRAM MANAGERS

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Officials responsible for public and strategic planning and response to hazardous materials emergencies, including: State and local (fire service, law enforcement, planning, public works, health, environment). Primary: those with operational roles and responsibilities.

Duration of Course: Two days

Scope and Content: Assistance mechanisms for planning and response; tactical requirements; hazardous materials characteristics; regulatory compliance.

Methodology/Presentation Modes: Combination of classroom instruction and exercises.

Prerequisites: None

Scheduling and Delivery: This course is delivered by the States through the EMI field delivery system. Locations and frequency of course offerings will vary and can be rescheduled on demand.

Agency Contact: State Training Officers or the FEMA regional office for your area. Other questions may be directed to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: INTEGRATED EMERGENCY MANAGEMENT COURSE:
HAZARDOUS MATERIALS

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Elected and appointed city and county officials, upper and mid-management personnel, supervisory and operations staff from fire service, law enforcement, public affairs, public works, emergency medical, Red Cross, school systems, state liaison, and business and industry. Toxicologists and radiological health physicists (State and local).

Duration of Course: Five days resident, three days field

Scope and Content: Hazardous materials overview; packaging and identifying hazardous materials; incident decision-making; emergency program management and other disciplines orientations; protective equipment; emergency evacuation; media relations; stress management; scenario exercise.

Methodology/Presentation Modes: A combination of lectures, group planning activities and exercise. Exercise is for one full day.

Prerequisites: None; recommended prior experience in emergency operations or attendance at state or FEMA emergency management courses.

Scheduling and Delivery: This course is delivered in residence at FEMA's Emergency Management Institute (EMI) and by EMI qualified instructors on State teams in the field.

Agency Contact: Contact your State Emergency Management Agency for local delivery or see EMI Catalog for resident delivery schedule:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: EMERGENCY MANAGEMENT, U. S. A.

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: General Public

Duration of Course: (Home-study)

Scope and Content: Self-study for general public; natural and technological hazards; development of family-oriented emergency plans. The emergency management practices identified pertain to hazardous materials emergencies as well as all other emrgencies.

Methodology/Presentation Modes: Readings; individual assignments.

Preprequisites: None

Scheduling and Delivery: This self-study course is deployed on an as-requested basis through FEMA's nationwide self-study program.

Agency Contact: Federal Emergency Management Agency

FEMA Home Study Program
Administrative Office
Emergency Management Institute
16825 South Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1170

Title: HAZARDOUS MATERIALS: THE PESTICIDE CHALLENGE

Agency Offering Course: Federal Emergency Management Agency/
National Fire Academy (FEMA/NFA)

Target Audiences: Line fire officers with fireground command responsibilities; fire/rescue training officers, company-level fire rescue officers; other emergency response agency supervisors; senior fire fighters who occasionally serve as company officers at fire incidents.

Duration of Course: 12 hours

Scope and Content: Recognition and identification of pesticides; exposure hazards to people, property and environment, information resources, preplanning, and first aid; spill control and firefighting strategies and tactics.

Methodology/Presentation Modes: Standard presentations and case histories; extensive use of simulation exercises.

Prerequisites: None

Scheduling and Delivery: Material developed, field tested, and handed-off to State and local training agencies for delivery at the local level. Training materials including, Instructor Guide, Student Manual and audio-visual support material may be purchased through the National Audio Visual Center, National Archives and Records Service, 8700 Edgeworth Drive, Capitol Heights, Maryland 20743-3701. Phone: (301) 763-1896

Agency Contact: Federal Emergency Management Agency

Field Programs Division
National Fire Academy
National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1129

Title: HAZARDOUS SUBSTANCE SPECIALIST

Agency Offering Course: Federal Emergency Management Agency/ National Fire Academy (FEMA/NFA)

Target Audiences: Fire service personnel with a minimum of three years active service either in fire prevention or fire suppression.

Duration of Course: 120 hours

Scope and Content: Compatibility of products; right to know laws; chemistry of hazardous materials; using National Fire Prevention codes and local fire codes.

Methodology/Presentation Modes: Classroom presentations and video-taped presentations combined with individual homework assignments.

Prerequisites: None

Scheduling and Delivery: This course is scheduled and delivered in residence at FEMA's National Fire Academy. See NFA Catalog.

Agency Contact: Federal Emergency Management Agency

Resident Programs
National Fire Academy
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1084

Title: HAZARDOUS MATERIALS INCIDENT ANALYSIS

Agency Offering Course: Federal Emergency Management Agency/
National Fire Academy (FEMA/NFA)

Target Audiences: Emergency services personnel who may respond to hazardous materials incidents; includes line fire officers, fire and rescue training officers, and others involved with hazardous materials emergency or non-emergency situations.

Duration of Course: 2 days

Scope and Content: Analytical system, including the application of general emergency behavior models to predict the sequence of events at an incident; hazardous materials classes; labeling, packaging; recognition and identification.

Methodology/Presentation Modes: Combination of classroom lectures, case studies and analytical activities.

Prerequisites: None

Scheduling and Delivery: Material developed, field tested, and handed-off to State and local fire training agencies for delivery at the local level. Training materials including Instructor Guide, Student Manual and audio visual support material may be purchased through the National Audio Visual Center, National Archives and Records Service, 8700 Edgeworth Drive, Capitol Heights, Maryland 20743-3701. Phone: (301) 763-1896.

Agency Contact: Federal Emergency Management Agency

Field Programs Division
National Fire Academy
National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1129

Title: RECOGNIZING AND IDENTIFYING HAZARDOUS MATERIALS

Agency Offering Course: Federal Emergency Management Agency/
National Fire Academy (FEMA/NFA)

Target Audiences: Emergency services personnel who may respond to hazardous materials incidents. Fire officers, emergency services, and private sector personnel with decision making or functional duties in hazardous materials incidents.

Duration of Course: Three hours

Scope and Content: Hazardous materials classification; labeling; packaging; recognition; identification; and use of response guides.

Methodology/Presentation Modes: Classroom presentations, analytical activities.

Prerequisites: None

Scheduling and Delivery: Material developed, field tested, and handed-off to State and local fire training agencies for delivery at the local level. Training materials including Instructor Guide, Student Manual and audio visual support material may be purchased through the National Audio Visual Center, National Archives and Records Service, 8700 Edgeworth Drive, Capitol Heights, Maryland 20743-3701. Phone: (301) 763-1896.

Agency Contact: Federal Emergency Management Agency

Field Programs Division
National Fire Academy
National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1129

Title: THE CHEMISTRY OF HAZARDOUS MATERIALS

Agency Offering Course: Federal Emergency Management Agency/
National Fire Academy (FEMA/NFA)

Target Audiences: Emergency response personnel responsible for analysis, management and response to an incident or responsible for fire prevention inspection where knowledge of chemical behavior of material is essential.

Duration of Course: Two weeks (80 hours)

Scope and Content: Hazardous materials chemistry, safety operations; handling techniques; decision making; evaluation of the hazardous materials threat.

Methodology/Presentation Modes: Combination of classroom, videotape presentations and individual homework.

Prerequisites: None. Recommend NFA and EMI field courses.

Scheduling and Delivery: This course is scheduled and delivered in residence at FEMA's National Fire Academy.

Agency Contact: Federal Emergency Management Agency

Resident Programs Division
National Fire Academy
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1084

Title: HAZARDOUS MATERIALS TACTICAL CONSIDERATIONS

Agency Offering Course: Federal Emergency Management Agency/
National Fire Academy (FEMA/NFA)

Target Audiences: Personnel with hazardous materials response functions. Priority: chief officers to response team members, law enforcement agents, members of other agencies.

Duration of Course: Two weeks (80 hours)

Scope and Content: Hazardous materials response teams, organization and equipment; hazard recognition; analytical instruments; classes of materials; protective clothing; breathing apparatus.

Methodology/Presentation Modes: Classroom presentations, case studies, problem solving and a variety of simulated situations (with field equipment).

Prerequisites: "Chemistry of Hazardous Materials" should be taken prior to this course.

Scheduling and Delivery: This course is scheduled and delivered in residence at FEMA's National Fire Academy.

Agency Contact: Federal Emergency Management Agency

Resident Programs Division
National Fire Academy
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1084

RADIOLOGICAL TRAINING SERIES (RTS)

The Federal Emergency Management Agency (FEMA) delivers and coordinates the Radiological Training Series (RTS) which is an essential element in the development of State and local radiological capabilities under P.L. 920 with other Federal agencies. The primary purpose of this training is to provide the knowledge and skills needed by State and local personnel to deal with the radiation hazard. City, county and State governments, for example must have the capability to protect citizens from the effects of fallout, a transportation incident, or a fixed site emergency. A secondary or supplemental purpose is to provide peacetime radiological training and to promote awareness training for local organizations as needed.

The RTS is developed and administered by the Emergency Management Institute (EMI) to integrate FEMA's radiological preparedness programs at the community level and to assure a more comprehensive and well-balanced approach to training. In a peace-time context, this effort is intended to interface with and supplement the various existing State Radiological Emergency Response Systems and to provide a more capable cadre of local response personnel for that purpose. It is hoped that the implementation of this program would be a concerted effort among the various State organizations having a radiological preparedness or response function (e.g., State Emergency Management Agencies, State Radiological Health Agencies, etc.). It should be noted that the radiological training series is designed to provide fundamentals training for groups identified in the Radiological Protection System. More extensive or specialized training may be required in certain cases (e.g., specialized instrument training for monitoring teams who will use unique instrumentation for Nuclear Power Plant offsite monitoring purposes). In these cases, close coordination should be maintained with all State agencies involved (e.g., State Bureaus of Radiological Health) to assure proper training needs are identified and met.

In a national preparedness context, this effort supplements the various State Radiological Emergency Response Systems and provides a more knowledgeable cadre of local response personnel for that purpose. The implementation of this program requires a concerted effort among the various organizations having a radiological preparedness or response function (e.g., State Emergency Management Agencies, State Radiation Control Agencies, etc.). The Radiological Training Series provides "fundamentals" training for groups identified in the Radiological Protection System.

These courses support and sustain local radiological response capability and are designed for those who constitute a local radiological protection system:

Radiological Officers (RO)
Radiological Response Teams (RRT)
Radiological Monitors (RM)
Radiological Instructors (RI)

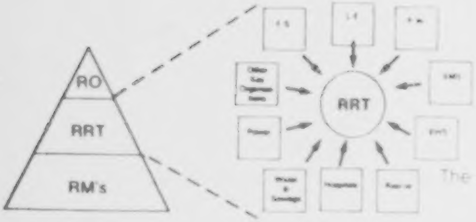
The Radiological Officer plans, designs and manages the local radiological protection system, which is part of the State's overall radiological protection system for peacetime and wartime. Radiological response teams, and radiological monitors, are selected individuals employed in public service, except that a radiological monitor also may be a volunteer who is not in public service. Typically, team members are drawn from standing emergency service organizations and from among those who operate vital, life-support facilities. For example:

Emergency Services

Fire Service (FS)
Emergency Welfare Services (EWS)
Law Enforcement (LE)
Public Works (PW)
Emergency Medical Service (EMS)
Rescue
Hospitals and Health Services

Essential Services/Vital Facilities

Water Supply and Sewage Disposal
Power Supply
School System
Shelter System
Other Key Organizations



The structure for local Radiological Response Teams

Title: FUNDAMENTALS COURSE FOR RADIOLOGICAL MONITORS (FCRM)

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Federal, State and local emergency services personnel, self-support organizations, and volunteers who will serve as radiological monitors and have in their custody, self-support radiation detection instruments provided by FEMA.

Duration of Course: Two days

Scope and Content: Fundamentals of radiation; overview of radiological hazards; radiological instruments; radiation protection principles; radiological hazard assessment; monitoring techniques and protective actions; exercises in: protection, analysis, instrument proficiency, area monitoring and radiological survey and protection.

Methodology/Presentation Modes: Classroom instruction and a series of interspersed exercises.

Prerequisites: None

Scheduling and Delivery: This course is scheduled and deployed through state emergency management agencies so as to accomplish training a minimum of two monitors per instrument set. Recruiting and training assistance is obtained from state radiological health agencies.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: FUNDAMENTALS COURSE FOR RADIOLOGICAL RESPONSE TEAMS (FCRRT)

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Organized radiological response teams primarily at the local level of government.

Duration of Course: Five days

Scope and Content: Overview of radiological emergencies; radiological protection system; radiation fundamentals; biological effects and risks; special nuclear attack considerations; monitoring instruments, exposure and contamination control techniques; assessing on-scene radiological hazards; protective radiological exercise; nuclear attack exercise; state and local radiological protection system.

Methodology/Presentation Modes: A combination of standard lecture presentations and practical exercises.

Prerequisites: Fundamentals Course for Radiological Monitors

Scheduling and Delivery: This course is scheduled for approximately four offerings per year through FY89, and is deployed through the States.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: FUNDAMENTALS COURSE FOR RADIOLOGICAL OFFICERS (FCRO)

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: State and local radiological officers who manage the Radiological Protection Program.

Duration of Course: Five days

Scope and Content: Radiological Response Team Review exercise; special nuclear attack considerations; basic concepts of the radiological officer; instrumentation and response planning, managing a radiological protection system; state and local system; source handling techniques; peacetime and attack scenario protection exercises.

Methodology/Presentation Modes: A combination of standard classroom presentations and practical exercises.

Prerequisites: Fundamentals Course for Radiological Monitors and Fundamentals Course for Radiological Response Teams.

Scheduling and Delivery: This course is scheduled and deployed by the states based on estimated need. Currently the deployment level is approximately two offerings per state through FY88.

Agency Contact: For attendance, contact your State Emegency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: RADIOLOGICAL MONITOR INSTRUCTOR COURSE (RMIC)

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Instructors who will teach the Fundamentals Course for Radiological Monitors and the Aerial Radiological Monitoring Course.

Duration of Course: Three days

Scope and Content: Recruiting and scheduling; instructional techniques and methodology; expedient radiological training; radiation source set handling techniques; review of FCRM modules; microteaching.

Methodology/Presentation Modes: A combination of classroom presentation, practical exercises and use of aerial monitoring instructional techniques.

Prerequisites: Fundamental Course for Radiological Monitors and Fundamentals Course for Radiological Response Teams plus for Part II, Aerial Radiological Monitor Course.

Scheduling and Delivery: This course is scheduled and deployed as needed through the states.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: RADIOLOGICAL OFFICER REFRESHER COURSE (RORC)

AgencyOfferingCourse: Federal Emergency Management Agency/ Emergency Management Institute (FEMA/EMI)

Target Audiences: Previously trained radiological officers.

Duration of Course: Three days

Scope and Content: (Tentative) Review of radiation, its effects, and procedures in emergency; instrumentation and monitoring techniques review.

Methodology/Presentation Modes: Combination of classroom presentation and practical exercise.

Prerequisites: Fundamentals Course for Radiological Officers

Scheduling and Delivery: This course is deployed through the states at a current level of approximately two per state in 1986-1988.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: RADIOLOGICAL MONITORING REFRESHER COURSE (RMRC)

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Previously trained Radiological Monitors

Duration of Course: Four hours

Scope and Content: Review of Fundamental Course for Radiological Monitors topics; instrument review; radiological monitoring exercise.

Methodology/Presentation Modes: A combination of standard classroom presentation and practical exercises

Prerequisites: Fundamental Course for Radiological Monitors

Scheduling and Delivery: This course is scheduled and deployed through the state emergency programs at the level of approximately one offering per state every two years.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Agency
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: RADIOLOGICAL RESPONSE TEAM REFRESHER COURSE (RRTRC)

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Previously trained Radiological Response Team Members.

Duration of Course: Two days

Scope and Content: Topics of Fundamental Course for Radiological Response Teams; exercises that review and cover: radiation protection, detection instruments, monitoring techniques, weapons effects, peacetime protective actions, incident response and recovery.

Methodology/Presentation Modes: Combination of classroom instruction and exercises.

Prerequisites: Fundamentals Course for Radiological Response Team (FCRRT)

Scheduling and Delivery: To be conducted by the states at least every two years.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: HOSPITAL EMERGENCY DEPARTMENT MANAGEMENT OF RADIATION ACCIDENTS

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Physicians, Nurses and others who provide emergency medical services in hospitals.

Duration of Course: One day

Scope and Content: Introduction to radiation, accidents, preparing to receive the radiation accident victim, emergency care of radiation accident victims.

Methodology/Presentation Modes: A combination of classroom instruction and practical exercises.

Prerequisites: None

Scheduling and Delivery: This course is scheduled and deployed by State emergency management agencies on an as-needed basis.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: RADIOLOGICAL EMERGENCY PREPAREDNESS PLANNING COURSE

Agency Offering Course: Federal Emergency Management Agency/
Emergency Management Institute
(FEMA/EMI)

Target Audiences: Federal, state, local government and utility personnel involved in radiological emergency preparedness planning under provisions of NUREG 0654/FEMA REP-1 and other guidelines. Primary: new REP planners and emergency response managers.

Duration of Course Five days

Scope and Content: Analysis of radiological hazards; off-site monitoring and instrumentation; radiological protective actions; regulatory considerations; planning policies and criteria; planning workshop; planning, conducting and evaluating exercises; media relations; presenting the plan to the public.

Methodology/Presentation Modes: Combination of standard class--room instruction and workshop activities. Starting in FY 1987 this course becomes a track of the Multi-Hazard Planning Course.

Prerequisites: None. Recommend taking FEMA's Professional Development Series Course, "Emergency Planning" offered by State Emergency Management Agencies locally in each state.

Scheduling and Delivery: This course is delivered in residence at FEMA's Emergency Management Institute.

Agency Contact: For attendance contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: FUNDAMENTALS COURSE FOR RADIOLOGICAL RESPONSE TEAMS/ RADIOLOGICAL OFFICERS TRAIN-THE-TRAINER (RADIOLOGICAL INSTRUCTOR COURSE III)

Agency Offering Course: Federal Emergency Management Agency/ Emergency Management Institute (FEMA/EMI)

Target Audiences: Instructors who will teach the Fundamentals Course for Radiological Response Teams, Fundamentals Course for Radiological Officers and the Radiological Monitor Instructor Course and who have completed the Fundamentals Course for Radiological Monitors, Radiological Response Teams, and Radiological Officers, and the Radiological Monitor Instructor Course.

Duration of Course: One week

Scope and Content: A one-week train-the-trainer course designed to qualify instructors to teach the following three courses: Fundamentals Course for Radiological Response Teams (FCRRT), Fundamentals Course for Radiological Officers (FCRO), and Radiological Monitor Instructor Course (RMIC).

Methodology/Presentation Modes: Classroom lecture and group activities

Prerequisites: Fundamentals Course for Radiological Monitors, Radiological Response Teams, and Radiological Officers, and the Radiological Monitor Instructor Course.

Scheduling and Delivery: This course is delivered in residence at FEMA's Emergency Management Institute.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

Title: RADIOLOGICAL EMERGENCY RESPONSE COURSE

Agency Offering Course: Federal Emergency Management Agency/ Department of Energy (FEMA/DOE)

Target Audiences: Federal, and State, government Radiological Response Team (RRT) members. Local personnel may be selected from local RRTs and become part of state RRT prior to attending this course. Not for first responders. Attendees become assigned members of State and Federal teams.

Duration of Course: Eight and one-half days

Scope and Content: Proper response techniques; management of incidents involving various radiolcgical hazards.

Methodology/Presentation Modes: Combination of classroom instruction and field exercises.

Prerequisites: Fundamentals Course for Radiological Response Teams, Fundamentals Course for Radiological Monitors or equivalent.

Scheduling and Delivery: This course is delivered in residence at the Nevada Test Site near Las Vegas, Nevada.

Agency Contact: For attendance, contact your State Emergency Management Agency direct, any other questions, direct to:

Emergency Management Institute
National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727

Ph: (301) 447-1000

U.S. DEPARTMENT OF ENERGY/FEDERAL EMERGENCY MANAGEMENT AGENCY

Title: MEDICAL PLANNING AND CARE IN RADIATION ACCIDENTS

Agency Offering Course: U.S. Department of Energy/
Federal Emergency Management Agency
(DOE/FEMA)

Target Audiences: Physicians who provide medical services to the nuclear industry; city, county, state health officers.

Duration of Course: One week

Scope and Content: Fundamentals of radiation and radiology, radiation detection and measurement, care of radioactively contaminated injuries, evaluation and treatment of internal radioactive contamination, acute radiation symptoms.

Methodology/Presentation Modes: Standard classroom presentations combined with demonstration of equipment and facilities.

Prerequisites: None

Scheduling and Delivery: This course is delivered approximately three times per year; it is deployed through the Radiation Emergency Assistance Center/Training Site (REAC/TS).

Agency Contact: U.S. Department of Energy

REAC/TS
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117

Ph. (615) 576-3131

Title: HEALTH PHYSICS IN RADIATION ACCIDENTS

Agency Offering Course: U.S. Department of Energy/
Federal Emergency Management Agency
(DOE/FEMA)

Target Audiences: Health physicists who may be called upon to assist physicians and nurses in medical management aspects following radiation accidents.

Duration of Course: One week

Scope and Content: Radiation physics review, principles of radiation detection and internal dosimetry, protective clothing and equipment, radiological emergency procedures, role of health physicist in medical environment.

Methodology/Presentation Modes: Standard lectures, and demonstrations, laboratory exercises, simulated radiation accident drill.

Prerequisites: None

Scheduling and Delivery: This course is delivered approximately two times per year; it is deployed through the Radiation Emergency Assistance Center/Training Site.

Agency Contact: U.S. Department of Energy

REAC/TS
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117

Ph: (615) 576-3131

Title: HANDLING OF RADIATION ACCIDENTS BY EMERGENCY PERSONNEL

Agency Offering Course: U.S. Department of Energy/
Federal Emergency Management Agency
(DOE/FEMA)

Target Audiences: Emergency room physicians and nurses who may be called upon to administer initial hospital aid to a radiation accident victim.

Duration of Course: Three and one-half days

Scope and Content: Fundamentals of radiation; how to: detect and measure it, prevent the spread of contamination, reduce the radiation dose to the victim and attending personnel; role of medical physicist in caring for contaminated accident victims.

Methodology/Presentation Modes: Lectures, demonstrations, laboratory exercises, simulated accident drill.

Prerequisities: None

Scheduling and Delivery: This course is delivered approximately five times per year; it is deployed through the Radiation Emergency Assistance Central Training Site (REAC/TS).

Agency Contact: U.S. Department of Energy

REAC/TS
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117

Ph: (615) 576-3131

U.S. DEPARTMENT OF ENERGY

Title: RADIOACTIVE MATERIAL TRANSPORTATION BASIC WORKSHOP

Agency Offering Course: U.S. Department of Energy (DOE)

Target Audiences: Primary: DOE employees and DOE contractor traffic departments; Secondary (space available): commercial carriers, enforcement agencies. Note: Each DOE site has its own training program. Courses are generally open to individuals from State and local governments on a space available basis.

Duration of Course: One week

Scope and Content: Overview of hazardous materials regulations (49CFR100-178); shipping papers, required markings, labels and placards, additional requirements; requirements of shipping radioactive materials; Nuclear Regulatory Commission and DOE transportation orders.

Methodology/Presentation Modes: Seminar and workshop format

Prerequisites: None

Scheduling and Delivery: Delivered approximately four to five times per year near DOE sites.

Agency Contact: U.S. Department of Energy nearest site, or:

Teresa Yearwood
Conference Coordinator

Ph: (615) 576-1785 (Eastern Time Zone)

Title: RADIOACTIVE MATERIAL ORIENTATION SEMINAR

Agency Offering Course: U.S. Department of Energy (DOE)

Target Audiences: Personnel representing national, state and local government agencies.

Duration of Course: Two to Four hours

Scope and Content: Shipment of radioactive material, the regulatory process, Federal enforcement, DOE operations, public concerns, emergency response.

Methodology/Presentation Modes: Workshop format

Prerequisites: None

Scheduling and Delivery: This course is basically scheduled on a demand basis. It is delivered at local sites by Department of Energy instructors.

Agency Contact: U.S. Department of Energy nearest site, or:

Teresa Yearwood
Conference Coordinator

Ph: (615) 576-1785 (Eastern Time Zone)

NUCLEAR REGULATORY COMMISSION

Title: PROTECTIVE ACTION DECISION MAKING AND THE ROLE OF DOSE ASSESSMENT

Agency Offering Course: Nuclear Regulatory Commission (NRC)

Target Audience: Primary audiences are the key protective action decision makers of state and local governments and their technical staffs including local emergency managers; also nuclear power plant licensees. Criteria: responsibility in the decision making process relating to specified facilities, based on emergency plans.

Duration of Course: One to Three Day Workshop

Scope and Content: Reactor systems and engineered safeguards; severe accident phenomenology (the chemical and physical processes of accidents); emergency planning bases; planning criteria and regulations; protective action guidelines; emergency classification/criteria; emergency action levels; protective action decision making (shelter /evacuation decisions) accident assessment; dose assessment; source term (quantity of radioactive material leaving plant); dispersion; dosimetry; environmental measurements; federal radiological monitoring and assessment center; federal radiological emergency response plan; cognizant federal agency group sessions and discussions.

Methodology/Presentation Modes: Approximately 1/3 lectures, 2/3 facilitated analysis, problem-solving and discussion.

Prerequisites: No direct prerequisite

Scheduling and Delivery: This course is scheduled approximately one time a year by the NRC regions with more sessions in the larger regions (I-II-III).

Agency Contact: Nuclear Regulatory Commission

NRC Regional Office
Emergency Response Coordinators

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Title: HAZARDOUS MATERIALS

Agency Offering Course: U.S. Department of Labor/Occupational Safety and Health Administration (DOL/OSHA)

Target Audiences: Employees who will be inspecting hazardous materials in fixed industrial facilities; state employees dealing with OSHA standards. Requirements for participation could be waived for interested state and local employees.

Duration of Course: Nine days (Four day field version)

Scope and Content: OSHA standards and other consensus and proprietary standards related to handling and storing hazardous materials in industrial settings; specific industrial processes: welding, spraying, dipping, the detection of unsafe storage; electrical and ventilation factors that contribute to the creation and abatement of hazardous conditions; the relationship between hazardous conditions and unsafe procedures and appropriate standards for abatement action; and specification of necessary precautions for hazardous operations.

Methodology/Presentation Modes: This course is conducted in a standard classroom setting. It is presented through lectures (approximately 3/4) and demonstration/hands-on activities (approximately 1/4).

Prerequisites: No specific prerequisites except involvement with OSHA standards.

Scheduling and Delivery: The schedule for this course is established prior to the beginning of each fiscal year. The longer option is presented at the OSHA training center in Chicago while the four day field version is site-specific.

Agency Contact: Nearest OSHA Office, or:

Al Paliliunas
Occupational Health Training Branch
OSHA Training Institute
U.S. Department of Labor
1555 Times Drive
Des Plaines, IL 60018

Ph: (312) 297-4810

Title: FIRE SAFETY PRINCIPLES

Agency Offering Course: U. S. Department of Labor/Occupational Safety and Health Administration (OSHA)

Target Audiences: Primary target audiences are safety and health professionals, including state, Federal, and private sector. May include local employees. Audience criteria are job-related (focus is on the safety and health requirements specified in 29 CFR 1910 subparts E and L). Most focus on application and use of OSHA standards. Non-federal participants usually are state OSHA counterparts (50%) or agencies administering enforcement programs with OSHA funds. Examples are State Departments of Labor and Public Health Agencies. This course is not designed for emergency response professionals.

Duration of Course: Nine days

Scope and Content: Learning to recognize potential fire hazards; fire chemistry; types and effectiveness of extinguishing agents and methods (function and use), and fire detection and alarm systems; ways of dealing with fires; means of egress; emergency action plans; fire brigade and fire prevention plans.

Methodology/Presentation Modes: Standard classroom format and presentation mode: Approximately 2/3 lecture (time and material) and 1/3 hands-on or demonstration activities.

Prerequisites: None

Scheduling and Delivery: This course is usually delivered two times per year with additional courses on request. It is conducted at field locations by OSHA instructors and consultants.

Agency Contact: Nearest OSHA Office, or:

Al Paliliunas
Occupational Health Training Branch
OSHA Training Institute
U.S. Department of Labor
1555 Times Drive
Des Plaines, IL 60018

Ph. (312) 297-4810

U.S. DEPARTMENT OF TRANSPORTATION

Title: HAZARDOUS MATERIALS COMPLIANCE AND ENFORCEMENT COURSE

Agency Offering Course: U.S. Department of Transportation (DOT)

Target Audiences: Federal, state and local enforcement personnel

Duration of Course: 18-20 hours precourse, one week in class, variable on the job exercise (supervised).

Scope and Content: Definition of hazard classes; proper shipping names; labeling; placarding; marking of containers; shipping paper requirements; hazardous substance and waste transportation requirements; safety requirements for motor carriers; cargo tank requirements for roadside inspections; summary of new regulations.

Methodology/Presentation Modes: A combination of home study and preclass examination, classroom training with lectures and work projects (block examinations); on the job exercise under supervision.

Prerequisites: No training prerequisites; however, the classroom phase must be preceded by a successful examination completion by the participant.

Scheduling and Delivery: Scheduled on the basis of eligible agency or jurisdiction requests (approximately 15 times); deployed to any location with appropriate training and field demonstration facilities; delivered by Transportation Safety Institute instructors.

Agency Contact: U.S. Department of Transportation

James McCauley or David Goodman
Transportation Safety Institute
DMA-62
6500 South MacArthur Blvd.
Oklahoma City, OK 73125

Ph: (405) 686-4824

Title: CARGO TANK COMPLIANCE AND ENFORCEMENT COURSE

Agency Offering Course: U.S. Department of Transportation/
Transportation Safety Institute
(DOT/TSI)

Target Audiences Federal, State, local law enforcement officials having jurisdiction over the highway transportation of hazardous materials in cargo tanks.

Duration of Course: Three days (classroom phase)

Scope and Content: Classroom phase topics: theory of construction and practical considerations; specifications; systematic inspection procedures; common defects; certification; testing; recordkeeping requirements; cryogenic, non-spec, portable, intermodal, and vacuum tanks.

Methodology/Presentation Modes: Three phased training: Preclass, primarily review of materials; classroom/field instruction; on the job application under supervision.

Prerequisites: Attendance at a basic hazardous materials training course.

Scheduling and Delivery: Two offerings are scheduled per Fiscal Year; others may be scheduled on request. Deployment is site-specific; delivery is by qualified Transportation Safety Institute instructors.

Agency Contact: U.S. Department of Transportation

James McCauley or David Goodman
Transportation Safety Institute
DMA-62
6500 South MacArthur Blvd.
Oklahoma City, OK 73125

Ph: (405) 686-4824

Title: A TRAINER'S COURSE FOR HAZARDOUS MATERIALS SAFETY COMPLIANCE AND ENFORCEMENT

Agency Offering Course: U.S. Department of Transportation (DOT)

Target Audiences: This course is for experienced trainers meeting the following criteria: one year experience teaching enforcement-related courses; successful completion of the basic Hazardous Materials Course offered by Transportation Safety Institute (TSI); two years experience enforcing hazardous materials regulations. An exam can replace the last two attendance prerequisites.

Duration of Course: 10.0 days

Scope and Content: Procedure for using regulations; enforcement workshops; hazardous substance and waste transportation requirements; other regulated materials; motor carrier transport requirements; radioactive materials regulations.

Methodology/Presentation Modes: Classroom in-depth explanation of material, teaching workshops, lesson plan development-workshops, field inspection basic instruction.

Prerequisites: See Target Audience above.

Scheduling and Delivery: Two offerings are scheduled per Fiscal Year; others may be scheduled on request. Deployed at TSI and other pre-arranged locations by TSI instructors.

Agency Contact: U.S. Department of Transportation

James McCauley or David Goodman
Transportation Safety Institute
DMA-62
6500 South MacArthur Blvd.
Oklahoma City, OK 73125

Ph: (405) 686-4824

U.S. COAST GUARD

Titles: ON-SCENE COORDINATOR/LOCAL RESPONSE TEAM TRAINING EXERCISE

ON-SCENE COORDINATOR/REGIONAL RESPONSE TEAM EXERCISES

NATIONAL STRIKE FORCE TRAINING

Agency Offering Activities: U.S. Department of Transportation/ U.S. Coast Guard (DOT/USCG)

Target Audiences: Target audience is determined by the scenario to be used in exercise. Primary target audiences are Federal response officials including the One-Scene Coordinator (OSC) from USCG or EPA, plus the members of the Regional Response Tear (RTT) and state members of the RRT. Local officials may be part of the target audience but the specific configuration depends on the exercise scenario and location. In most instances the local participants could include: Department heads and the local response community (Fire Service, Police, Emergency Medical Services, Emergency Managment, Public Works, Environmental Health, City Managers).

Scope and Content: Scenario exercise on serious hazardous materials incidents; refresher sessions on hazardous materials; responder and Federal-local roles, responsibilities, and task/functions; exercise debriefing. Note: Exercise may be exclusively table top or it may be field deployment exercising. Both the type of exercise and the specific content vary from one course to another depending on assessed needs of the local response community. The duration of the course is generally a one day exercise; and a one-half to one day debriefing. Some options are up to three or four days in length. There are no training prerequisites for the courses and participants are invited through the USCG One-Scene Coordinator's Office. USCG selects the site.

Realistic exercise tests of the policies, plans and procedures and personnel of the community given a major oil/chemical spill; waterborne situations that involve vessels; technical scenerio with issues that are of major concern to the OSC and RRT. Response simulation-exercise using audio-visual system to present the simulation program. A debriefing/open forum follows the exercise.

Chemical terminology; chemical references; hazard assessment; protective clothing/resporatory selection and use; environmental monitoring instrumentation; response procedures; public/community rela-tions and case histories; equipment use and care in a simulated chemical spill. Federal participants determined by OSC; others by location and interest.

Scheduling and Delivery: This activity is scheduled by the Coast Guard. It is deployed and delivered through the office of the local USCG On-Scene Coordinator and is conducted at the specific sites for which the exercise is designed. This activity is offered on a limited, selective basis.

Agency Contact: Nearest U.S. Coast Guard Office, or:

Glen Epler
GMER-2
U.S.C.G. Headquarters
2100 - 2nd Street, S.W.
Washington, D. C. 20593

Ph. (202) 267-0438

SECTION 3 - HAZARDOUS MATERIALS DIGEST

HEADQUARTERS, REGIONAL AND STATE AGENCY CONTACTS

1. Department of Energy (DOE)

Paul Grimm

U.S. Department of Energy
Washington, D.C. 20545
(301) 353-4403

Robert C. Ricks, Ph.D.

REACT/TS
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117

(615) 576-3131

2. Environmental Protection Agency (EPA)

Thomas C. Sell or Ellery D. Savage

U.S. Environmental Protection Agency
26 West St. Clair Street
Cincinnati, Ohio 45268

(513) 569-7537

3. Nuclear Regulatory Commission (NRC)

Tom McKenna

Incident Response Branch
Office of Inspection and Enforcement
Nuclear Regulatory Commission
Washington, D.C. 20555

(202) 492-4184

4. U.S. Department of Labor (DOL)

Al Paliliunas

Occupational Health Training Branch
OSHA Training Institute
U.S. Department of Labor
155 Times Drive
Des Plaines, IL 60018

(312) 297-4810

5. U.S. Department of Transportation/ U.S. Coast Guard (DOT/USCG)

Glen Epler

GMER-2
U.S.C.G. Headquarters
2100 - 2nd Street, S.W.
Washington, D.C. 20593

(202) 267-0438

6. U.S. Department of Transportation (DOT)
Transportation Safety Institute

James McCauley or David Goodman

Transportation Safety Institute
DMA-62
6500 South MacArthur Blvd.
Oklahoma City, OK 73125

(405) 686-4824

7. Federal Emergency Management Agency (FEMA)
National Fire Academy (NFA) and Emergency Management Institute (EMI)

National Emergency Training Center
16825 South Seton Avenue
Emmitsburg, MD 21727

(301) 447-1000

8. FEMA Regional Training and Education Offices

Region I:
John W. McCormack POCH, Room 422
Boston, MA 02109
FTS: 223-9532; or (617) 223-9532

Region II:
26 Federal Plaza, Room 1337
New York, NY 10278
FTS: 264-8980; or (212) 264-8980

Region III:
Liberty Square Building, 2nd Floor
105 South Seventh Street
Philadelphia, PA 19106
FTS: 597-5154; or (215) 597-5154

Region IV:
1371 Peachtree Street, N.E., Suite 700
Atlanta, GA 30309
FTS: 257-2410; or (404) 347-2410

Region V:
300 South Wacker Drive
24th Floor
Chicago, IL 60606
FTS: 353-3040; or (312) 353-3040

Region VI:
Federal Regional Center 206
800 North Loop 288
Denton, TX 76201-3698
FTS: 749-9262; or (817) 898-5262

Region VII:
911 Walnut Street, Room 300
Kansas City, MO 64106
FTS: 758-6912; or (816) 374-6912

Region VIII:
Denver Federal Center
Building 710
Box 25267
Denver, CO 80225-0267
FTS: 322-4929; or (303) 235-4929

Region IX:
Building 105
Presidio of San Francisco, CA 94129
FTS: 469-7108; or (415) 963-7108

Region X:
Federal Regional Center
130 - 228th Street, SW
Bothell, WA 98021-9796
FTS: 390-4603; or (206) 487-4603

ENVIRONMENTAL PROTECTION AGENCY SUPERFUND REGIONAL CONTACTS

U.S. EPA - Region I
JFK Federal Building
Boston, MA 02203
FTS: 835-3665 or
(617) 565-3665

U.S. EPA - Region II
26 Federal Plaza
New York, NY 10278
FTS: 264-6012 or
(212) 264-6012

U.S. EPA - Region III
841 Chestnut Building
Philadelphia, PA 19107
FTS: 597-4858 or
(215) 597-4858

U.S. EPA - Region IV
345 Courtland Street, NE
Atlanta, GA 30365
FTS: 257-2216 or
(404) 347-3931

U.S. EPA - Region V
230 S. Dearborn Street
Chicago, IL 60604
FTS: 886-3009 or
(312) 886-3009

U.S. EPA - Region VI
Allied Bank Tower, 10th Floor
1445 Ross Avenue
Dallas, TX 75202-2733
FTS: 255-2270 or
(214) 655-2270

U.S. EPA - Region VII
25 Funston Road
Kansas City, KS 66115
FTS: 757-3888 or
(913) 236-3888

U.S. EPA - Region VIII
1 Denver Place, Suite 1300
999 18th Street
Denver, CO 80202
FTS: 564-1723 or
(303) 293-1723

U.S. EPA - Region IX
215 Fremont Street
San Francisco, CA 94105
FTS: 454-8132
(415) 974-8132

U.S. EPA - Region X
Waste Mgmt. Branch (MS-533)
1200 6th Avenue
Seattle, WA 98101
FTS: 399-2871 or
(206) 442-2871

Effective: May 1, 1987

STATE EMERGENCY MANAGEMENT TRAINING OFFICES

The following offices are those within each state organization which schedule EMI course offerings, dates, and locations which best meet the needs of their respective local and State service agencies.

The Emergency Management Institute works in cooperation with and through these sponsors, to strengthen and support existing emergency management training and education activities.

For specific information regarding which field courses will be offered in which State, course location, dates and registration/ application procedures, contact the State Sponsor listed below. State Sponsors are solely responsible for all admission procedures for courses delivered in their State

REGION I

CONNECTICUT

Training Director
Office of Civil
Preparedness
360 Broad Street
Hartford, CT 06105
FTS: 244-3441/-3442
(203) 566-5483

MAINE

Training Director
Bureau of Civil Emergency
Preparedness
State Office Building
Station 72
Augusta, ME 04333
FTS: 836-8212
(207) 289-4080/4081

MASSACHUSETTS

Training Director
MA Civil Defense Agency
400 Worcester Road
Framingham, MA 01701
(617) 727-2368

NEW HAMPSHIRE

Training Director
Governor's Office of
Emergency Management
State Office Park, South
107 Pleasant Street
Concord, NH 03301
FTS: 842-2231
(603) 271-2231

RHODE ISLAND

Training Officer
Emergency Management
Agency
State House
Providence, RI 02903
FTS: 836-8217
(401) 421-7333

VERMONT

Training Officer
Emergency Management Div.
Department of Public Safety
103 South Main Street
Waterbury, VT 05676
FTS: 836-8218
(802) 244-8721

REGION II

NEW JERSEY

Training Officer
NJ State Office of
Emergency Management
P.O. Box 7068
West Trenton, NJ 08625
FTS: 530-4841
(609) 530-4841

NEW YORK

Training Officer
NY State Emergency
Management Office
Building #22
State Office Building Campus
Albany, NY 12226
(518) 457-9987

PUERTO RICO

Training Director
Office of Civil Defense
Box 5127
Puerto de Tierra Station
San Juan, PR 00906
(809) 724-0124

VIRGIN ISLANDS

Training Officer
Office of Civil Defense
and Emergency Services
304 King Street
Christensted
St. Croix, USVI 00820
(809) 773-2244

REGION III

DELAWARE

Information and Education
Officer
Division of Emergency
Planning and Operations
P.O. Box 527
Delaware City, DE 19706
FTS: 652-5517
(302) 834-4531

DISTRICT OF COLUMBIA

Training Officer
D.C. Office of Emergency
Preparedness
2000 14th Street, N.W.
8th Floor
Washington, DC 20009
FTS: 652-5524
(202) 727-6161

MARYLAND

Training Officer
MD Emergency Management
and Civil Defense Agency
2 Sudbrook Lane, East
Pikesville, MD 21208
FTS: 652-5518/5523
(301) 486-4422

PENNSYLVANIA

Training Officer
Pennsylvania Emergency
Management Agency
P.O. Box 3321
Harrisburg, PA 17105
FTS: 652-5516
(717) 783-8150

VIRGINIA

Training Officer
Department of Emergency
Services
310 Turner Road
Richmond, VA 23225
FTS: 652-5515
(804) 323-2185

WEST VIRGINIA

Training Coordinator
Office of Emergency Services
Room EB-80
State Capitol Building
Charleston, WV 25305
FTS: 652-5514/5520
(304) 348-25946

REGION IV

ALABAMA

Training Officer
AL Emergency Management
Agency
520 South Court Street
Montgomery, AL 36130
(205) 834-1375

FLORIDA

Training Officer
Division of Emergency
Management
1720 South Gadsden Street
Tallahassee, FL 32399
(904) 488-1900

GEORGIA

Training Officer
Georgia Emergency
Management Agency
P.O. Box 18055
Atlanta, GA 303116-0055
(404) 656-6174

KENTUCKY

Training Officer
Disaster and Emergency
Services
Boone Center
EOC Building
Frankfort, KY 40601
(502) 564-8600

MISSISSIPPI

Training Officer
Mississippi Emergency
Management Agency
P.O. Box 4501
Fondren Station
Jackson, MS 39216
(601) 352-9100/or 960-9048

NORTH CAROLINA

Training Officer
Div Of Emergency Management
Administration Building
116 W. Jones Street
Raleigh, NC 27611
(919) 733-3867

SOUTH CAROLINA

Training Officer
Emergency Preparedness Div.
Rutledge Building
1429 Senate Street
Columbia, SC 29201
(803) 734-8020

TENNESSEE

Training Officer
Tennessee Emergency
Management Agency
3041 Sidco Drive
Emergency Operations Center
Nashville, TN 37204
(615) 252-3300

REGION V

ILLINOIS

Training Officer
IL Emergency Services
and Disaster Agency
110 E. Adams Street
Springfield, IL 62706
FTS: 552-4562
(217) 782-7860

INDIANA

Training Officer
IN Department of Civil
Defense and Emergency
Management
100 N. Senate Avenue
Indianapolis, IN 46204
FTS: 552-4563
(317) 232-3830

MICHIGAN

Training Director
Emergency Services Division
Department of State Police
111 S. Capitol Avenue
Lansing, MI 48933
FTS: 552-4561
(517) 373-0617

MINNESOTA

Training Officer
Minnesota Division of
Emergency Management
State Capitol, Room B-5
St. Paul, MN 55155
FTS: 552-4564
(612) 296-2233

OHIO

Training Officer
Disaster Services Agency
2825 W. Granville Road
Worthington, OH 43085
FTS: 552-4565
(614) 889-7150

WISCONSIN

Training Coordinator
Wisconsin Division of
Emergency Government
4802 Sheboygan Avenue
Madison, WI 53702
FTS: 552-4558
(608) 266-5643

REGION VI

ARKANSAS

Information and Education
Supervisor
Arkansas Office of
Emergency Services
P.O. Box 758
Conway, AR 72032
(501) 329-5601

LOUISIANA

Training Officer
Louisiana Office of
Emergency Preparedness
Department of Public Safety
P.O. Box 66536
Baton Rouge, LA 70896
(504) 342-1582

NEW MEXICO

Training Officer
New Mexico Office of Civil
Emergency Preparedness
P.O. Box 4277
Santa Fe, NM 87501
(505) 473-2476

OKLAHOMA

State Civil Defense
Training Director
Sequoyah-Will Rogers
Building Tunnel
P.O. Box 53365
Oklahoma City, OK 73152
(405) 521-2481

TEXAS

Training Officer
Division of Emergency
Management
Texas Department of
Public Safety
P.O. Box 4087
Austin, TX 78773
(512) 465-2196

REGION VII

IOWA

Training Officer
Office of Disaster Services
Hoover State Office Building
Level A-29
Des Moines, IA 50319
(515) 281-3231

KANSAS

Training Officer
State Emergency Division of
Emergency Preparedness
P.O. Box C-300
Topeka, KS 66601
(913) 233-9253

MISSOURI

Training Officer
State Emergency
Management Agency
P.O. Box 116
Jefferson City, MO 65102
(314) 751-9754

NEBRASKA

Training and Education
Specialist
NE Civil Defense Agency
1300 Military Road
Lincoln, NE 68508
(402) 473-1412

REGION VIII

COLORADO

Training Officer
CO Division of Disaster
Emergency Services
Camp George West
Golden, CO 80401
(303) 273-1784

MONTANA

Training Officer
Montana Disaster and
Emergency Services
P.O. Box 4789
Helena, MT 59604
FTS: 585-5011
(406) 444-6911

NORTH DAKOTA

Training Officer
North Dakota Division of
Emergency Management
P.O. Box 5511
Bismark, ND 58502-5511
FTS: 783-4011
(701) 224-2111

SOUTH DAKOTA

Training Officer
South Dakota Emergency and
Disaster Services
500 East Capitol
State Capitol
Pierre, SD 57501
FTS: 782-7000
(605) 773-3231

UTAH

Training Officer
Utah Division of Comprehensive
Emergency Management
1543 Sunnyside Avenue
Salt Lake City, UT 84108
(801) 533-5271
FTS: 533-5271

WYOMING

Training Officer
Wyoming Emergency
Management Agency
P.O. Box 1709
5500 Bishop Blvd.
Cheyenne, WY 82001
FTS: 777-7566
(307) 777-7566

REGION IX

ARIZONA

Director, Division of
Emergency Services
ATTN: Training Officer
5636 E. McDowell Road
Phoenix, AZ 85008
(602) 231-6225

CALIFORNIA

Governor's Office of
Emergency Services
P.O. Box 8104
San Luis Obispo, CA 93403
FTS: 629-3343
(805) 544-7101

HAWAII

Office of the Director
Civil Defense
Education Training Officer
Department of Defense
3949 Diamond Head Road
Honolulu, HI 96816
FTS: 551-1975
(808) 734-2161

NEVADA

State of Nevada
Military Department
Division of Emergency
Management
ATTN: Training Officer
2525 S. Carson Street
Capitol Complex
Carson City, NV 79810
(702) 885-4240

AMERICAN SAMOA

Department of Public Safety
Territorial Emergency
Management Coordinating
Office (TEMCO)
State Emergency Training
Officer
P.O. Box 1086
Fagatogo, American Samoa 96799
99-011-684-633-2331

GUAM

Director, Civil Defense
ATTN: Training Officer
Guam Emergency Services Office
P.O. Box 2877
Agana, Guam 96910
93-011-671-477-9841

NORTHERN MARIANA ISLANDS

Commonwealth of Northern
Mariana Islands
ATTN: Training Officer
Saipan, Mariana Islands 96950
93-011-670-234-7403

REGION X

ALASKA

Training Officer
Alaska Division of
Emergency Services
P.O. Box 2267
Palmer, AK 99645
FTS: 396-0215
(907) 376-3061

IDAHO

Training Officer
Bureau of Disaster Services
650 West State
Boise, ID 83720
FTS: 396-0275
(208) 334-3460

OREGON

Training Officer
Oregon Division of
Emergency Management
Capitol Building, Room 43
Salem, OR 97310
FTS: 396-0269
(503) 378-4124

WASHINGTON

Training Officer
4220 E. Martin Way
Olympia, WA 98504
FTS: 396-0258
(206) 459-9191

FEMA-NATIONAL FIRE ACADEMY (NFA) STATE SPONSORS

The following sponsors are those organizational agencies within each State which select Academy "outreach" course offerings, dates, and locations which best meet the needs of their respective fire/rescue services.

The National Fire Academy works in cooperation with and through these sponsors, to strengthen and support existing fire training and education activities.

For specific information regarding which field courses will be offered in which State, course location, dates, and registration/application procedures, contact the State Sponsor listed below. State Sponsors are solely responsible for all admissions procedures for courses delivered in their State.

ALABAMA

Alabama State Fire College
Shelton State Community
College
2015 McFarland Ave., East
Tuscaloosa, AL 35405
(205) 759-1508

ALASKA

Fire Service Training
Div. of Fire Prevention
Dept. of Public Safety
Pouch N, State Office Bldg.
Juneau, AK 99811
(907) 465-3117

ARIZONA

Fire Training
Arizona Division of
Emergency Services
5636 E. McDowell Road
Phoeniz, AZ 85008
(602) 231-6313

ARKANSAS

Arkansas Fire Academy
SAU-TECH
P.O. Box 3048
East Camden, AR 71701
(501) 5774-1521 or 0741

CALIFORNIA

Fire Service Training and
Education System
7171 Bowling Dr., Suite 600
Sacramento, CA 95823
(916) 427-4204

COLORADO

Colorado Div. of Fire Safety
Dept. of Public Safety
700 Bldg. B
1325 South Colorado Blvd.
Denver, CO 80222
(303) 691-8142

CONNECTICUT

Fire Training and Education
Comm. on Fire Prevention
and Control
294 Colony Street
Meriden, CT 06450
(203) 238-6587

DELAWARE

Delaware State Fire School
R.D. #2, Box 166
Dover, DE 19901
(302) 736-4773

FLORIDA

Florida State Fire College
1501 W. Silver Springs Blvd.
Ocala, FL 32675
(904) 732-0526

GEORGIA

Georgia Fire Academy
1112 Clay Street
Marietta, GA 30060
(404) 424-7315

HAWAII

Training Bureau
Honolulu Fire Department
1455 S. Beretania St.-Rm 313
Honolulu, HI 96814
(808) 943-3139 or 3130

IDAHO

Fire Service Training
State Division for
Vocational Education
650 West State Street
Boise, ID 83720
(208) 334-3211

ILLINOIS

Fire Service Institute
University of Illinois
202 Agriculture Engineering
Building
1208 West Peabody Drive
Urbana, IL 61801
(217) 333-3800

INDIANA

State Fire Marshal's Office
1099 North Meridian
Suite 9000
Indianapolis, IN 46204
(317) 232-2222

IOWA

Fire Service Education
Iowa State University
Ames, IA 50011
(515) 294-6817

KANSAS

Fire Service Training
Div. of Continuing Education
University of Kansas
645 New Hampshire Avenue
Lawrence, KS 66044
(913) 864-4467

KENTUCKY

Public Service Short-Term
Training Unit
Office of Vocational
Education
KY Department of Education
Room 2110
Capital Plaza Tower
Frankfort, KY 40601
(502) 564-2326

LOUISIANA

LSU Fireman Training Program
Pleasant Hall
Louisiana State University
Baton Rouge, LA 70803
(504) 766-0600

MAINE

Fire Training and Education
S.M.V.T.I.
Fort Road
South Portland, ME 04106
(207) 799-7303

MARYLAND

Maryland Fire and Rescue
Institute
University of Maryland
College Park, MD 20742
(301) 454-2416

MASSACHUSETTS

MA Firefighting Academy
59 Horse Pond Road
Sudbury, MA 01776
(617) 443-8926

MICHIGAN

Michigan Firefighter's
Training Council
7150 Harris Drive
Lansing, MI 48913
(517) 322-1922

MINNESOTA

Adult Vocational Section
MN Department of Education
529 Capital Square Bldg.
550 Cedar Street
St. Paul, MN 55101
(612) 296-6516

MISSISSIPPI

Mississippi Fire Academy
Route 10, Box 295
Jackson, MS 39208
(601) 932-2444

MISSOURI

Missouri Fire & Rescue
Training Institute
1001 Ashland Gravel Road
Columbia, MO 65201
(314) 882-4735

MONTANA

Montana Fire Service
Training School
2100 - 16th Avenue South
Great Falls, MT 59405
(406) 761-7885

NEBRASKA

Nebraska Fire Service
3721 West Cuming
Lincoln, NE 68524-1896
(402) 471-2803

NEVADA

Fire Service Training Section
State Fire Marshal Division
Capitol Complex
Carson City, NV 89710
(702) 885-4290

NEW HAMPSHIRE

New Hampshire Fire Standards
and Training Commission
Storrs Street at Chandler
Concord, NH 03301
(603) 271-2661

NEW JERSEY

Training and Certification
Bureau of Fire Safety
New Jersey Department of
Community Affairs
3131 Princeton Pike
Lawrenceville, NJ 08648
(609) 530-3283

NEW MEXICO

New Mexico State Fire
Marshal's Office
P.O. Drawer 1269
Santa Fe, NM 87501
(505) 827-4538

NEW YORK

Training and Education
Office of Fire Prevention
and Control
NY State Dept. of State
162 Washington Avenue
Albany, NY 12231
(518) 474-6746

NORTH CAROLINA

Fire Training Services
Dept. of Community Colleges
Education Building, Room 176
Raleigh, NC 27611
(919) 733-3345

NORTH DAKOTA

North Dakota Fireman's Assoc.
176 First Avenue, NE
Beach, ND 58621
(701) 872-4392

OHIO

Ohio Fire Academy
Ohio Division of State
Fire Marshal
8895 East Main Street
Reynoldsburg, OH 43068
(614) 864-5510

OKLAHOMA

Fire Service Training
Fire Building
Oklahoma State University
Stillwater, OK 74078
(405) 624-5727

OREGON

State Fire Marshal
State Fire Training
3000 Market Street Plaza
Suite 534
Salem, OR 97310
(503) 383-4917

PENNSYLVANIA

PA State Fire School
Office of Fire Safety
Services /PEMA
P.O. Box 631
Lewistown, PA 17044
(717) 248-1115

RHODE ISLAND

State Fire Marshal
Div. Of Fire Safety
1270 Mineral Spring Ave.
North Providence, RI 02904
(401) 277-2335

SOUTH CAROLINA

South Carolina Fire Academy
2920 Fire Academy Road
West Columbia, SC 29169
(803) 758-8411

SOUTH DAKOTA

Fire Service Training
118 West Capitol
Pierre, SD 57501
(605) 773-3876

TENNESSEE

TN State Fire School
1303 Old Fort Parkway
Murfreesboro, TN 37130
(615) 893-4095

TEXAS

Fire Protection Training
Texas Engineering
Extension Service
Texas A & M University
FE Drawer K
College Station, TX 77843-8000
(409) 845-7641

UTAH

State Fire Service Training
UT Technical College at Provo
P.O. Box 1609
Provo, UT 84601
(801) 226-5000 ext. 352

VERMONT

Fire Service Training Program
VT State Firefighters Assoc.
P.O. Box 53
Pittsford, VT 05763
(802) 483-9407

VIRGINIA

VA Department of Fire Programs
101 North 14th Street
James Monroe Bldg., 17th Floor
Richmond, VA 23219
(804) 225-2681

WASHINGTON

Fire Service Training
Commission for Vocational
 Education
Airdustrial Park
Building 17, Mail Stop LS-10
Olympia, WA 98504
(206) 753-5679

WEST VIRGINIA

Fire Service Extension
State Fire Training Center
Monogahela Blvd.
West Virginia University
Morgantown, WV 26506
(034) 293-2106

WISCONSIN

Fire Education and Training
WI Board for Vocational,
 Technical & Adult Education
310 Price Place
P.O. Box 7874
Madison, WI 53707
(608) 266-7994

WYOMING

Director of Fire Training
Fire Prevention & Electrical
 Safety
Room 2012, Hershler Building
Cheyenne, WY 82002
(307) 777-6683

Mr. **Anderson**. Mr. Fisher, in your statement you indicate Section 305 of title 3 of SARA authorizes funds for hazardous materials training. Now how much money has been made available for this purpose in fiscal year 1988?

Mr. **Fisher**. Well, in 1988 the funds have not been made available to date, Mr. Chairman. In 1987 they have.

Mr. **Anderson**. Why not?

Mr. **Fisher**. As I understand it, I don't know all the details, sir, but I understand there are some administrative problems. If you would care to, I can provide for the record a more detailed answer to that question.

Mr. **Anderson**. Do you know how much it was for 1987?

Mr. **Fisher**. The entire $5 million was made available to the States in 1987.

Mr. **Anderson**. How much money was requested for fiscal year 1989? Fiscal year 1989, now. I am getting ahead of you.

Mr. **Fisher**. In fiscal year 1989 there were no funds in the President's budget requested for this program.

Mr. **Anderson**. Could you tell us the reason for this?

Mr. **Fisher**. Basically, Mr. Chairman, in the current budgetary environment the priorities were focused more directly on those programs that can support both peacetime emergencies as well as national security emergencies, and for those reasons those funds were not put in the President's budget.

Mr. **Anderson**. But you were telling us a moment ago that this is one of our key programs, and now there is not going to be any money provided?

Mr. **Fisher**. In just the training, the funds were not requested for the programs. It is a key program in the Federal Emergency Management Agency.

Mr. **Anderson**. How can they do it without funds for training?

Mr. **Fisher**. I really can't add any more to that, Mr. Chairman. I would like to address it further, if I may, for the record.

Mr. **Anderson**. Yes. Would you do that, please?

Mr. **Fisher**. Yes, sir, I will.

Mr. **Makris**. May I at least make an observation, sir?

Mr. **Anderson**. Sure.

Mr. **Makris**. Part of the problem might have been that in the first two years following the title 3 reauthorization, the Environmental Protection Agency, because FEMA was unable to move it into the budget process, was provided those funds under its budget. This became—in the third year it was agreed that it would be funded by FEMA, so there may have been a mix-up in terms of that whole process. I would say that is probably a possible explanation.

Mr. **Anderson**. What type of technical assistance does FEMA provide?

Mr. **Fisher**. In addition to our work through the National Response Team, through our regional offices we provide technical assistance through the Regional Response Teams working with the other Federal agencies at the regional level, and providing more direct guidance in more unique regional characteristics, working with the EPA, OSHA and other agencies in conducting workshops, seminars, training sessions. Some of our regional staffs are heavily involved in contingency planning training, to mention a few, sir.

Mr. ANDERSON. On pages 7 and 8 you discuss training courses provided at your facility at Emmitsburg. Who is trained at the institute and the academy?

Mr. FISHER. Through the Emergency Management Institute, State and local officials are trained there in hazardous materials emergency management courses, the contingency planning course being one. At the National Fire Academy, first responders, for example, are trained in several of the hazardous materials incident courses that are conducted there. I don't have an exact number for you. I can get you a list of courses, the specific courses and the number of personnel trained, if you wish, Mr. Chairman.

Mr. ANDERSON. Yes, we would like to have as much information as we can get. My next question, you will probably have to do the same.

How much does it cost to train a participant, and who pays those costs? Now if you would rather do that for the record, it is all right.

Mr. FISHER. I don't have the specific information on that, sir. I will provide it for the record.

Mr. ANDERSON. Do it for the record then, including who pays the cost.

Approximately how many emergency response personnel are trained each year?

Mr. FISHER. At our facility in Emmitsburg?

Mr. ANDERSON. Or at both of them, I would guess.

Mr. FISHER. I'm sorry, sir. I don't have the information on that. I can get that for you.

Mr. ANDERSON. Well, provide us the information. Would you want to give us a guess now, so we can get an idea of what range we are discussing? Is it——

Mr. FISHER. I have someone from the Office of Training that may be able to provide that, sir.

Mr. ANDERSON. Are we talking about 2,000, 3,000, 5,000, 10,000, or what?

Ms. NOCITA. Mr. Chairman, on the resident courses at Emmitsburg, over 5,000 emergency managers are trained each year, but that is a very small portion of the total amount of training. It is estimated that as many as 200,000 are reached in terms of the teleconferences.

Mr. ANDERSON. That 200,000 have some type of training?

Ms. NOCITA. Exactly, and in addition to that, the train-the-trainer course that Mr. Makris had alluded to earlier provides trainers to go out, then, to conduct additional courses in the field, so there is a variety of training efforts done in that regard.

Mr. ANDERSON. Would you please identify yourself.

Ms. NOCITA. Dorothy Nocita, Office of Training.

Thank you, sir.

Mr. ANDERSON. Mr. Thompson, is the NRC responsible for inspecting plant facilities where the containers for transporting nuclear and radioactive materials are manufactured?

Mr. THOMPSON. Yes, sir, for those type B casks that we certify, which are the ones for the highly radioactive material, we have an inspection program run through our Vendor Inspector Branch in which we conduct inspections of those casks during manufacturing. They are subject to inspection at any time. We can either come in announced or unannounced, and we do inspections of the manufacturing facility as well as we do inspections of the shippers and receivers, as the case may be.

Mr. **Anderson**. You may have almost answered my next question: How often are inspections held and how are they conducted?

Mr. **Thompson**. Well, they are held typically, if it deals with an initial shipment, for example, from one facility to another facility—we normally look at spent fuel shipments as campaigns—because of the number of shipments involved, there may be 10 truck shipments in the first campaign—for NRC will do a 100 percent inspection of the initial shipments in a campaign. If we don't have any problems, if we feel that the licensee who is actually conducting the shipment is doing a first-rate job, we will reduce our inspection activities to a sampling and audit process after that.

With respect to the manufacturing of casks for those shipments, we are notified 45 days prior to starting the manufacture of a new cask for shipment, and for the major ones we will inspect those on a periodic basis. I don't know that we have—I can't give you a specific number. For example, I think in the last 2 years we did about six vendor inspections, but there are no major casks being manufactured right now. We will be monitoring the casks, for instance, that are being designed for the Department of Energy under the Nuclear Waste Policy Act. Those activities are done fairly frequently.

In general, we inspect records associated with the licensee because we hold the licensee responsible for conducting his own inspections. That is, before each shipment an inspection is made by the licensee, and he documents the results of his inspections, and this documentation is also inspected by our regional people as well as our headquarters individuals. So we in the past have done maybe 1,000 or so transportation-type inspections a year.

Mr. **Anderson**. Does the NRC certify the quality control personnel at the plants?

Mr. **Thompson**. I think you said quality control personnel——

Mr. **Anderson**. Yes.

Mr. **Thompson** [continuing]. As opposed to quality control programs. We don't certify individuals, such as we do in reactor operations, where we will actually conduct a licensing examination of the operators. That may be similar to what the Department of Transportation does through its program, or maybe the States in their licensing of the truck drivers.

With respect to the quality assurance personnel, there is an industry-type standard in which the individuals and the training qualifications are established that are acceptable for us, and we review and evaluate the quality assurance program, which does include the training of the individuals who are responsible for conducting and carrying out that quality assurance program, but we do not look at the individuals and certify the individuals themselves.

Mr. **Anderson**. What types of accidents have occurred during the transportation of radioactive materials and radioactive waste?

Mr. Thompson. Well, typically the accidents that normally come to mind—and I guess there have been some 150 or 160 over the last 10 or 15 years that have occurred—most of these are truck-type transportation accidents. The most significant ones that I am aware of deal with what we call the drums, 55-gallon drums of yellowcake, which is a uranium ore concentrate which is kind of a yellow powder that is transported from the uranium mines to a conversion facility.

We have had about three of those accidents where these major truckloads have either hit—have had a problem on the rural roads and have turned over, spilling these fairly large amounts of uranium yellowcake on the ground, which required some cleanup activities. There was really no health hazard on those, although it was a fairly massive cleanup activity, some lasting up to 2 weeks, I think, in one case up in North Dakota.

Mr. Anderson. Which are the most common, and how frequently do these occur?

Mr. Thompson. I don't know which is the most common. I guess I will have to supply that for the record.

Mr. Anderson. If you could, do that for the record. Also, which are the most serious?

[The following was received from Mr. Thompson:]

NRC Comments on H.R. 4069

The U.S. Nuclear Regulatory Commission (NRC) has reviewed H.R. 4069, a proposed amendment to the Hazardous Materials Transportation Act. The NRC supports this amendment. It acts to ensure the consistent implementation of existing U.S. Department of Transportation (DOT) regulations for the safe transport of radioactive materials, and to strengthen requirements for carrier and highway route safety. The major provisions, with specific comments, are described below.

The amendment adds provisions for specific preemption of State or local requirements in such areas as classification and labeling of hazardous materials, preparation of shipping papers, and fabrication of certified packages. The amendment also provides for the general preemption of State or local requirements that conflict with DOT requirements. NRC supports these provisions, which will ensure consistency in requirements for the transport of all hazardous materials including radioactive materials.

The amendment allows DOT to issue highway standards for routes designated for hazardous materials shipments, and to resolve disputes among States, about the routing. DOT already has routing requirements for placarded radioactive materials shipments and shipments of highway-route controlled quantities. NRC supports efforts to ensure a safe and equitable highway routing system.

The amendment adds a requirement to obtain a DOT-issued safety permit, for carriers of certain types and quantities of hazardous materials, including highway-route controlled quantities of radioactive materials. Carriers and individual drivers of highway-route controlled quantity shipment must already fulfill certain safety requirements, therefore, this provision should not significantly impact shipment of radioactive materials.

The NRC supports the amendment provisions which requires the DOT issue regulations for the safe transportation of hazardous materials in intrastate, as well as interstate and foreign commerce. This provision will provide for a consistent level of safety for applicable shipments of radioactive materials, including shipments with a single State.

Mr. Thompson. The most serious ones, I believe, are the ones I just described. In addition, there is another one we are currently investigating with the State of Texas, dealing with a radiography device which has a small, highly radioactive source in its center. That source came out of its container during an accident this past

January, where we in fact have an inspection going on down in Louisiana today concerning that device.

Mr. ANDERSON. Yes, we would like to have that for the record, my questions: Which are the most common, and how frequently do these occur? Which are the most serious, and how frequently do these occur? If you could kind of give us some figures for the record, that would be fine.

Mr. THOMPSON. We will be glad to do that, sir.

Mr. ANDERSON. Now the NRC must provide advance notice to States of scheduled shipment of nuclear waste and spent fuel. Are any security precautions required for these types of shipments?

Mr. THOMPSON. Yes, sir. Let me clarify that one point: NRC requires our licensees to provide that advance notification to the States. NRC does what I call a security or safeguard route survey. That is, we are aware of and have approved certain routes from a sabotage consideration, and in fact we periodically publish routes which have been approved for previous or current shipments. We have a publication for which States there are approved routes, and I would be glad to provide that for the record if you would like it. It gives you the extent of routing and shipments that we do approve, and in fact the States have found that to be a very useful dialogue with the Commission and with our licensees in understanding when shipments are going through the States. They often do inspections of these facilities or the transportation on their own.

[The following was received from Mr. Thompson:]

NUREG-0725
Rev. 6

Public Information Circular for Shipments of Irradiated Reactor Fuel

Manuscript Completed: September 1987
Date Published: April 1988

Division of Safeguards and Transportation
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

PREFACE

This circular has been prepared in response to numerous requests for information regarding routes for the shipment of irradiated reactor (spent) fuel subject to regulation by the Nuclear Regulatory Commission (NRC). The NRC staff approves such routes prior to their use, in accordance with the regulatory provisions of 10 CFR Part 73.37. The objective of the safeguards regulations contained in 10 CFR Part 73.37 is to provide protection against radioactive dispersal caused by malevolent acts by persons. The design and construction of the casks used to ship the spent fuel provide adequate radiological protection of the public health and safety against accidents. Therefore, transporting appropriately packaged spent fuel over existing rail systems and via any highway system is radiologically safe without specific NRC approval of the route. However, to assure adequate planning for protection against actual or attempted acts of radiological sabotage, the NRC requires advance route approval. This approval is given on a shipment-by-shipment or series basis, it is not a general approval of the route for subsequent spent fuel shipments.

Spent fuel shipment routes, primarily for road transportation, but also including three rail routes, are indicated on reproductions of road maps. Also included are the amounts of material shipped during the approximate 8-year period that safeguards regulations have been effective. This information is current as of September 30, 1987.

Section 147 of Public Law 96-295 provides that "...the public disclosure of information pertaining to the routes and quantities of shipments of... irradiated nuclear reactor fuel" shall not be prohibited. The maps and tables dealing with the spent fuel shipment routes and quantities included in this document are intended to facilitate the public disclosure of spent fuel shipment information. In addition, the Commission has chosen to provide information in this document regarding the NRC's safety and safeguards regulations for spent fuel shipments as well as safeguards incidents regarding spent fuel shipments (of which none have been reported to date). This additional information is furnished by the Commission in order to convey to the public a more complete picture of NRC regulatory practices concerning the shipment of spent fuel than could be obtained by the publication of the shipment routes and quantities alone.

The enclosed route information reflects approvals that have been granted in response to specific requests for shipments of spent fuel. It is not published to be used by carriers for authority to ship other categories of nuclear waste or other materials.

CONTENTS

Page

PREFACE iii

1 INTRODUCTION 1

1.1 About This Publication 1
1.2 NRC Regulatory Objectives 1
1.3 Safety of Spent Fuel Shipments 2

2 SAFEGUARDS FOR SPENT FUEL SHIPMENTS 3

2.1 Safeguards Incident Reporting Requirements 3
2.2 Safeguards Incidents Reported 3

3 APPROVED ROUTES FOR SPENT FUEL SHIPMENTS 3

3.1 Routes Described 3
3.2 Route Display Format 4
3.3 States Containing Approved Routes 4

4 AMOUNTS OF SPENT FUEL SHIPPED 4

APPENDIX A - SPENT FUEL SHIPMENT ROUTES BY STATE

United States (Contiguous) A-1
Arizona A-2
Arkansas A-3
California A-4
Colorado A-5
Connecticut A-6
Georgia A-7
Idaho A-8
Illinois (Northern) A-9
Illinois (Southern) A-10
Indiana A-11
Iowa A-12
Kansas A-13
Kentucky A-14
Maryland A-15
Michigan A-16
Minnesota A-17
Missouri A-18
Montana A-19
Nebraska A-20
Nevada A-21
New Jersey A-22
New Mexico A-23
New York A-24
North Carolina A-25
North Dakota A-26

Page
Ohio A-27
Oklahoma A-28
Oregon A-29
Pennsylvania A-30
Rhode Island A-31
South Carolina A-32
Tennessee A-33
Texas A-34
Utah A-35
Virginia A-36
Washington A-37
West Virginia A-38
Wisconsin A-39
Wyoming A-40

LIST OF TABLES

Table 1 States Containing Approved Spent Fuel Shipment Routes 5
Table 2 Number/Quantity of Shipments (number/kg) 6

1 INTRODUCTION

1.1 About This Publication

This publication is the seventh in a series of publications issued by the Nuclear Regulatory Commission in response to public information requests regarding the Commission's regulation of shipments of irradiated reactor fuel.

This publication contains basically three kinds of information.

(1) Routes recently approved (36 months) by the Commission for the shipment of irradiated reactor fuel.

(2) Information regarding any safeguards-significant incidents which have been reported during shipments along such routes, and

(3) Cumulative amounts of material shipped.

1.2 NRC Regulatory Objectives

The Nuclear Regulatory Commission is authorized under the Atomic Energy Act of 1954, as amended, to regulate the private nuclear industry for purposes of protecting the public health and safety and the common defense and security of the United States. The Commission is concerned with the transportation of all nuclear materials in the nuclear fuel cycle, which includes the transportation of irradiated reactor fuel (spent fuel).

Protection of the public, insofar as the transportation of spent fuel is concerned, depends on maintaining the integrity of the shipping casks in which the spent fuel is transported. As long as the radioactive material is kept within the casks, significant radiation doses to the public will not occur. The design of the cask is intended to provide reasonable assurance that transportation accidents, even severe ones, will not cause leakage. The NRC believes that the package design provides adequate protection so that it is safe to transport appropriately packaged spent fuel over existing rail and highway systems without specific NRC approval of the route.

Although the design of the shipping cask makes difficult the release of a significant amount of radioactive material as a result of sabotage, the NRC decided that until the possible consequences of sabotage could be evaluated more fully, protective measures in addition to reliance upon cask design are prudent. Hence, exercising prudence, the Commission approved in May 1979, for issuance in effective form, new interim regulations for strengthening the protection of shipments of spent fuel against radiological sabotage. In May 1980, these regulations were revised in response to public comments. The interim regulations require, among other things, NRC approval of routes for the transportation of spent fuel to assure adequate planning for protection against actual or attempted acts of radiological sabotage.

Furthermore, the routes approved by the Commission reflect the U.S. Department of Transportation (DOT) requirements of 49 CFR Part 177.825(b), which designate the use of the Interstate System of highways as being the primary roadways over which radioactive material shipments under a route plan are to be carried. The general designation as preferred highways is given to these roadways based upon an overall performance rating with respect to the lower accident rates and their capacity for reducing transit times.

Appropriate state routing agencies, following prescribed criteria, may designate an alternative route to the preferred interstate system.

1.3 Safety of Spent Fuel Shipments

The NRC distinguishes between safety regulation of shipments and safeguards regulation of shipments. Safety deals with protection against adverse consequences from accidents, or natural causes, while safeguards deals with the protection of shipments against deliberate, malevolent acts by persons.

The NRC ensures the safety of spent fuel shipments mainly through stringent packaging requirements. Spent fuel is shipped only in massive, durable casks designed to withstand severe accidents without release of the radioactive contents.

Of the thousands of shipments that have been made during the past 30 years, none has resulted in an identifiable injury to the public through release of radioactive material.

General standards and requirements for spent fuel casks are set forth in NRC regulations. A cask must be designed to withstand a series of specified impact, puncture, and fire environments, thereby providing reasonable assurance that the package will withstand serious transportation accidents. The cask design is initially reviewed by the NRC staff to verify its resistance to accidents. A certificate must be issued by the NRC before a cask fabricated from that design can be used to transport spent fuel.

The standards that have been established in the regulations provide that a cask shall prevent the loss or dispersion of the radioactive contents, provide adequate shielding and heat dissipation, and prevent nuclear criticality under both normal and accident conditions of transportation. The normal conditions of transportation which must be considered are specified in the regulations in terms of hot and cold environments, pressure differential, vibration, water spray, impact, puncture, and compression tests. Accident conditions which must be considered are specified in terms of impact, puncture and fire conditions. Thus far, success of the packaging strategy has been demonstrated despite an occasional traffic accident. For example, one such accident occurred on December 8, 1970, on a major highway near Oak Ridge, Tennessee. In this accident, the driver of a vehicle carrying a spent fuel cask swerved to avoid colliding with an oncoming vehicle, lost control, and overturned off the roadway. The cask assembly was thrown into a ditch, traveling more than 100 feet before coming to rest. No release of contents or release of radiation occurred. The outer surface of the cask suffered minor damage. The spent fuel cask was placed on another trailer and taken to its destination. The cask was returned to service following repair of the minor damage and inspection.

The durableness of casks has also been demonstrated in controlled tests. In one DOE test, a truck bearing a cask was deliberately placed in the path of and struck by a 120-ton locomotive traveling about 80 miles per hour. In another DOE test, a cask aboard a truck moving at about 80 miles per hour was deliberately crashed into an immovable concrete structure. Subsequent examination confirmed in both of these tests that no radioactive material would have been released from the casks had they been loaded with spent fuel. Thus, both field experience and controlled tests have substantiated the NRC strategy of depending upon packaging design for safety in transit.

For further information on spent fuel shipment safety, please consult NUREG/BR-0111, "Transporting Spent Fuel - Protection Provided Against Severe Highway and Railroad Accidents."

2 SAFEGUARDS FOR SPENT FUEL SHIPMENT

2.1 Safeguards Incident Reporting Requirements

Safeguards incidents for spent fuel shipments are those which involve attempts at radiological sabotage of spent fuel, or purposeful acts which threaten or result in significant degradation of the safeguards system used to protect the shipment. Licensees are required under existing regulations to immediately notify law enforcement authorities upon the occurrence or discovery of a safeguards incident for the purpose of initiating an appropriate response. In addition, licensees are required to promptly report safeguards incidents to the NRC by telephone, followed by a written report.

2.2 Safeguards Incidents Reported

To date no safeguards incidents involving the shipment of spent fuel have occurred. However, one NRC licensee was cited during an inspection in 1987 for two Level 5 violations for procedural noncompliance with spent fuel transportation safeguards regulations. Citations for Level 5 violations are the lowest form of citations issued by NRC for minor infractions of regulations.

3 APPROVED ROUTES FOR SPENT FUEL SHIPMENTS

3.1 Routes Described

NRC licensees planning to ship spent fuel are required to submit proposed routes for such shipments to the NRC staff for approval prior to the use of a given route. Once approved, the same route may be utilized for additional shipments in a proposed series of shipments without further approval of the route, provided that the NRC is notified in advance of each shipment. This approval is for a stated series of shipments, any subsequent shipments not a part of an approved series must be individually approved. The NRC approval is only for spent fuel shipments and does not include other categories of nuclear waste material. From time to time, the NRC may authorize alternate routes or detours as circumstances dictate at the time of shipment. Also, detours may be taken without prior approval in response to unforeseen circumstances which arise during a shipment. Criteria for determining when and how such detours may be taken are provided in published regulatory guidance (NUREG-0561, Rev. 1)

The spent fuel shipment routes shown in Appendix A of this document are those which were approved as of September 30, 1987. Some of these routes have been used for shipments which have already been completed, others for shipments which have yet to be completed, while some have been approved but have yet to be utilized. The routes shown do not include proposed routes.

3.2 Route Display Format

The routes are shown in the form of maps acquired from the U.S. Department of Transportation, Federal Highway Authority. Each state containing one or more approved spent fuel shipment routes is included. In some cases, to achieve the best clarity, only the portions of the state including the routes are shown. The routes are indicated by widened shaded lines drawn along the routes. The route numbers have been left unshaded to assure maximum clarity.

3.3 States Containing Approved Routes

The states containing portions of approved spent fuel shipment routes are listed in Table 1. In total, there are 38 states containing portions of such routes.

4 AMOUNTS OF SPENT FUEL SHIPPED

The approximate amounts of spent fuel (to the nearest kilogram (kg)) shipped from one facility to another are presented in Table 2. Each entry corresponding to a given combination of origin and destination for which a spent fuel shipment route is approved describes the number of shipments completed between July 16, 1979 and September 30, 1987, and the total number of kilograms of spent fuel included in such shipments (exclusive of structural and packaging material). Each location listed in Table 2 is considered to be alternately a point of origin or destination. Combinations of origins and destinations between which no spent fuel shipment routes are approved are indicated by the entry "NR."

TABLE 1

STATES CONTAINING APPROVED SPENT FUEL SHIPMENTS ROUTES

1. Arizona
2. Arkansas
3. California
4. Colorado
5. Connecticut
6. Georgia
7. Idaho
8. Illinois
9. Indiana
10. Iowa
11. Kansas
12. Kentucky
13. Maryland
14. Michigan
15. Minnesota
16. Missouri
17. Montana
18. Nebraska
19. Nevada
20. New Jersey
21. New Mexico
22. New York
23. North Carolina
24. North Dakota
25. Ohio
26. Oklahoma
27. Oregon
28. Pennsylvania
29. Rhode Island
30. South Carolina
31. Tennessee
32. Texas
33. Utah
34. Virginia
35. Washington
36. West Virginia
37. Wisconsin
38. Wyoming

Table 2 NUMBER/QUANTITY OF SHIPMENTS
(NUMBER/KILOGRAMS)

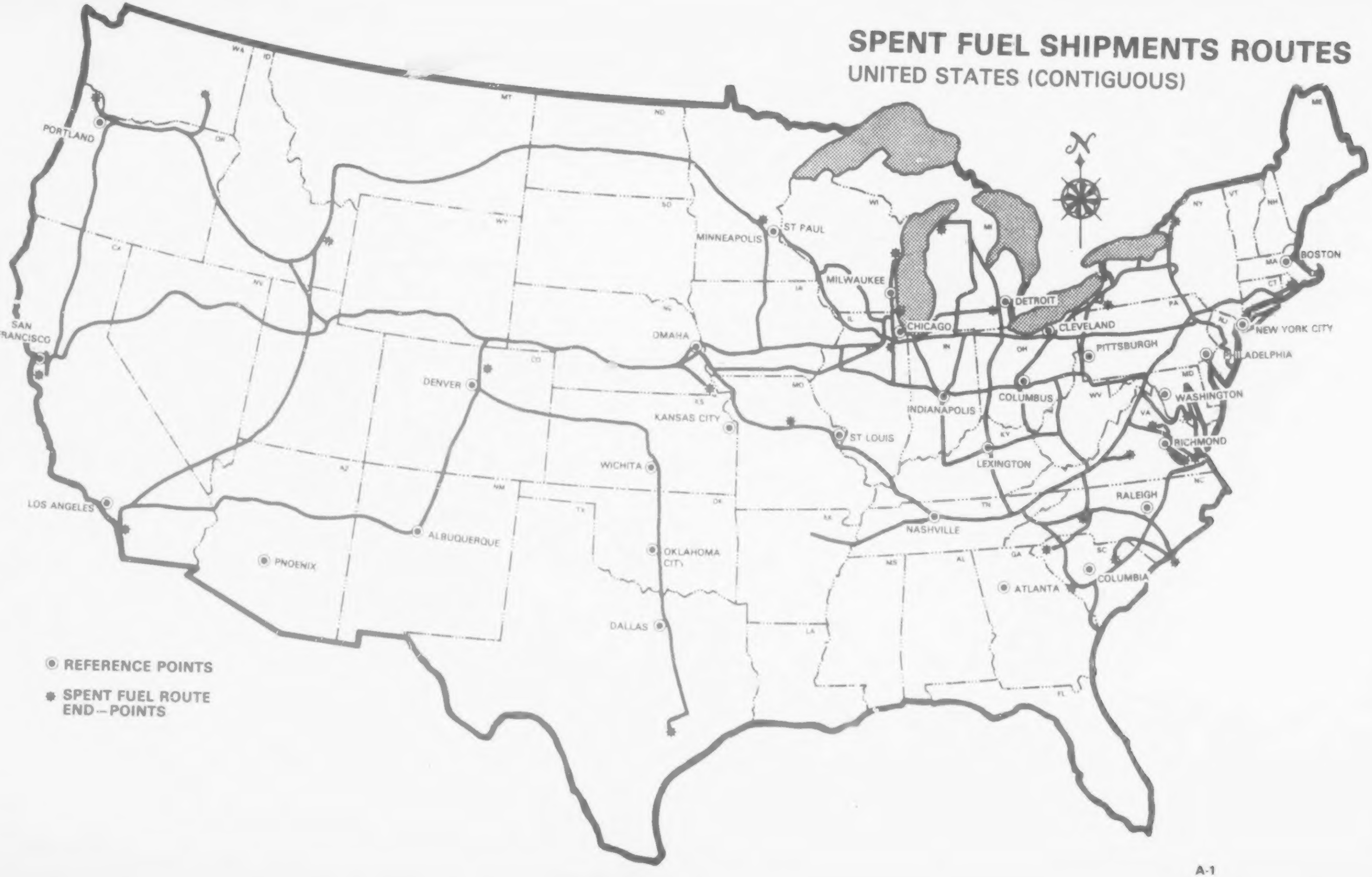
Key
NR = No Approved Route
* = New End-Point

DESTINATION	AILEEN, SC	CORDOVA, IL*	CORNELIUS, NC	FORKED RIVER, NJ	GENOA, WI	LUSBY, MD*	LYNCHBURG, VA	MORRIS, IL	NORTH ANNA, VA	OAK GROVE, IL	OAKLAND, CA	ONTARIO, NY*	PLEASANTON, CA	PORTSMOUTH, VA	RICHLAND, WA	SAN DIEGO, CA	SCCOVILLE, ID	SENECA, SC	SOUTHPORT, NC	TWO RIVERS, WI	WEST JEFFERSON, OH	ZION, IL
ALEXANDRIA BAY, NY	17/106	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ANN ARBOR, MI	8/16	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0/0	NR	NR	NR	NR	NR
BROWNVILLE, NE	NR	NR	NR	NR	NR	NR	NR	17/110749	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
* BUFFALO, NY	1/1	NR	NR	NR	NR	NR	NR	18/12066	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHARLEVOIX, MI	NR	NR	NR	NR	NR	NR	NR	NR	NR	0/0	NR	NR	NR	2/14	NR	NR	NR	NR	NR	NR	NR	NR
CHARLOTTESVILLE, VA	8/13	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
COLLEGE STATION, TX	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0/0	NR	NR	NR	NR	NR
COLUMBIA, MO	14/72	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	11/59	NR	NR	NR	NR	NR
CORDOVA, IL	NR	NR	NR	NR	NR	NR	2/499	NR	NR	NR	NR	NR	3/40	NR	NR	NR	NR	NR	NR	NR	1/18	NR
DERBY LANE, VT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
FORKED RIVER, NJ	NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1/49	NR
FORT CALHOUN, NE	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1/1	NR
* GAITHERSBURG, MD	7/22	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
* GARDEN CITY, GA	1/11	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
GRAVEL NECK, VA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1/20	NR
HADDAM NECK, CT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	3/1275	NR
HARTSVILLE, SC	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	19/49725	NR	NR	NR
LUSBY, MD	NR	NR	NR	NR	NR		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	3/64	NR
LYNCHBURG, VA	0/0	2/499	NR	NR	NR	NR		NR	NR	NR	NR	NR	2/42	NR	0/0	NR	NR	3/558	NR	NR	NR	NR
MONTICELLO, MN	NR	NR	NR	NR	NR	NR	NR	29/282995	NR	NR	NR	NR	4/55	NR	NR	NR	NR	NR	NR	NR	2/67	NR
MORRIS, IL	NR	NR	NR	NR	4/939	NR	3/58		NR	NR	NR	NR	NR	1/9	NR	NR	NR	NR	NR	109/46235	NR	NR
NARRAGANSETT, RI	3/13	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0/0	NR	NR	NR	NR	NR
NEWPORT NEWS, VA	0/0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0/0	NR	NR	NR	NR	NR
NORFOLK, VA	1/7	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0/0	NR	NR	NR	NR	NR
OAKLAND, CA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	8/43	NR	NR	NR	0/0	NR	NR	NR	NR	NR
OGDENSBURG, NY	14/69	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
* ONTARIO, NY	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	7/2975	NR
PEMBINA, ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1/3	NR	NR	NR	NR	NR
PLATTEVILLE, CO	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	2/10	120/488	NR	NR	NR	NR	NR
PLEASANTON, CA	NR	NR	NR	NR	NR	NR	NR	NR	NR	7/56	7/56	NR	3/102	NR	3/102	NR	18/71	NR	NR	NR	NR	NR
PORTLAND, OR	NR	NR	NR	NR	NR	NR	NR	NR	NR	[illegible]	NR	NR	NR	NR	NR	NR	26/121	NR	NR	NR	0/0	NR
PORTSMOUTH, VA	156/895	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	32/165	NR	NR	NR	NR	NR
RICHMOND, CA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
SAN CLEMENTE, CA	NR	NR	NR	NR	NR	NR	NR	16/6800	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
SAN DIEGO, CA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2/6		2/6	NR	NR	NR	NR	NR
SENECA, SC	NR	NR	114/106686	NR	NR	NR	4/937	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR	NR
SOUTHPORT, NC	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		NR	1/30	NR
TUXEDO, NY	5/14	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	3/18	NR	NR	NR	NR	NR	NR	NR
WATERFORD, CT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	3/36	NR	3/0	NR	NR	NR	NR	NR	NR	NR
WEST JEFFERSON, OH	NR	NR	NR	NR	NR	1/72	NR	2/791	NR	NR	NR	5/2632	2/28	NR	0/0	NR	NR	NR	NR	NR		2/879
WEST VALLEY, NY	NR	NR	NR	33/42960	NR	NR	NR	31/20447	NR	NR	NR	75/31875	NR	NR	NR	NR	NR	NR	NR	114/48450	1/2	NR
WILMINGTON, NC	2/18	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ZION, IL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2/920	

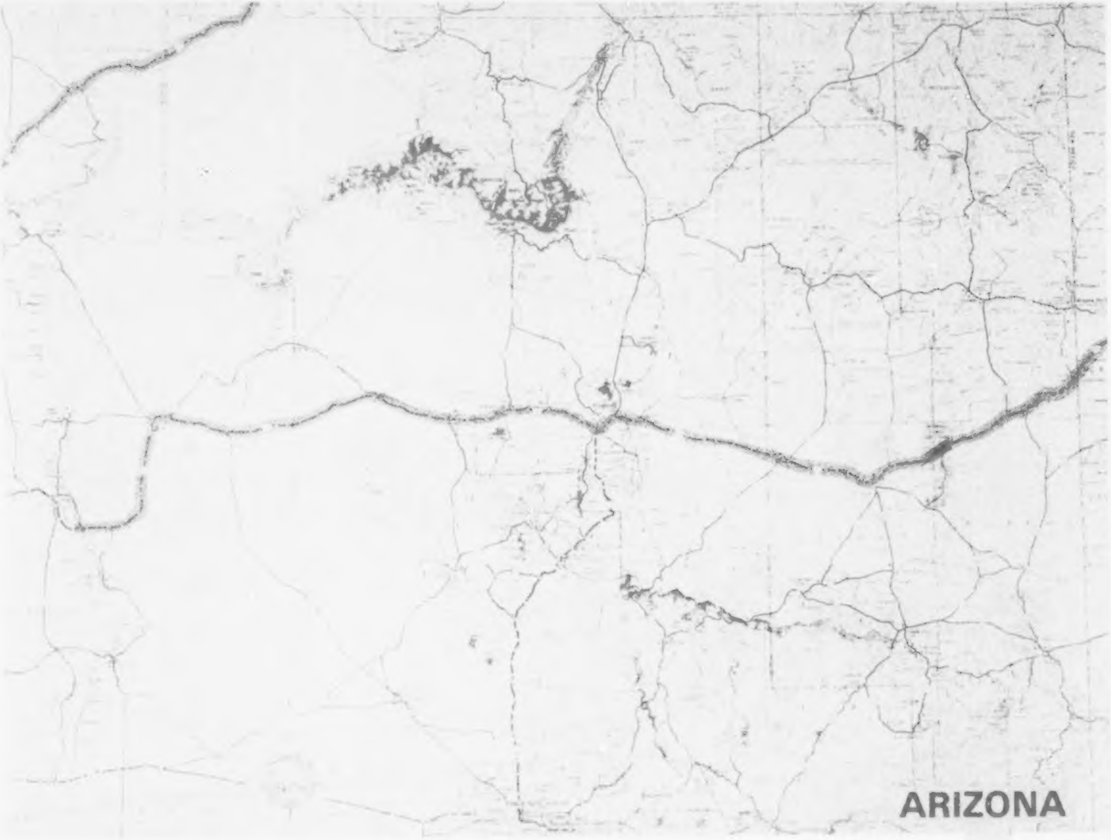
APPENDIX A

SPENT FUEL SHIPMENT ROUTES BY STATE

SPENT FUEL SHIPMENTS ROUTES
UNITED STATES (CONTIGUOUS)



N
PORTLAND
SAN FRANCISCO
LOS ANGELES
PHOENIX
ALBUQUERQUE
DENVER
WICHITA
OKLAHOMA CITY
DALLAS
KANSAS CITY
OMAHA
MINNEAPOLIS
ST PAUL
MILWAUKEE
CHICAGO
DETROIT
CLEVELAND
PITTSBURGH
INDIANAPOLIS
COLUMBUS
ST LOUIS
LEXINGTON
NASHVILLE
ATLANTA
COLUMBIA
RALEIGH
RICHMOND
WASHINGTON
PHILADELPHIA
NEW YORK CITY
BOSTON
WA
ID
OR
MT
WY
CA
NV
ND
SD
NE
CO
KS
AZ
NM
TX
OK
MN
WI
IA
IL
MO
MI
IN
OH
KY
TN
AR
LA
MS
AL
GA
FL
SC
NC
VA
WV
MD
PA
NY
NJ
CT
MA
VT
NH
ME
REFERENCE POINTS
SPENT FUEL ROUTE END—POINTS


ARIZONA
A-2

ARKANSAS

CALIFORNIA

COLORADO

CONNECTICUT

BEST AVAILABLE COPY

BEST AVAILABLE COPY

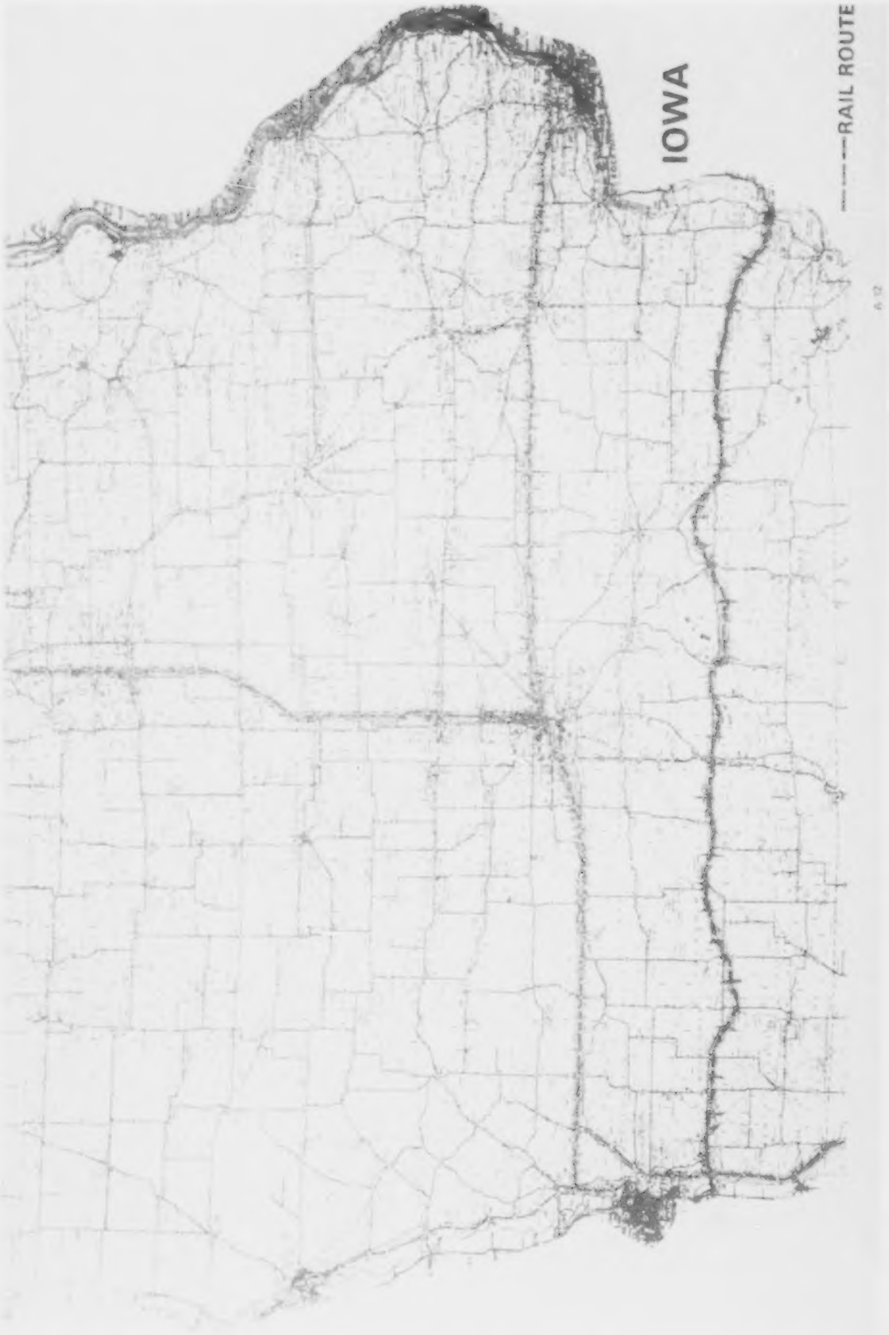
ILLINOIS
TRAIL ROUTE

BEST AVAILABLE COPY

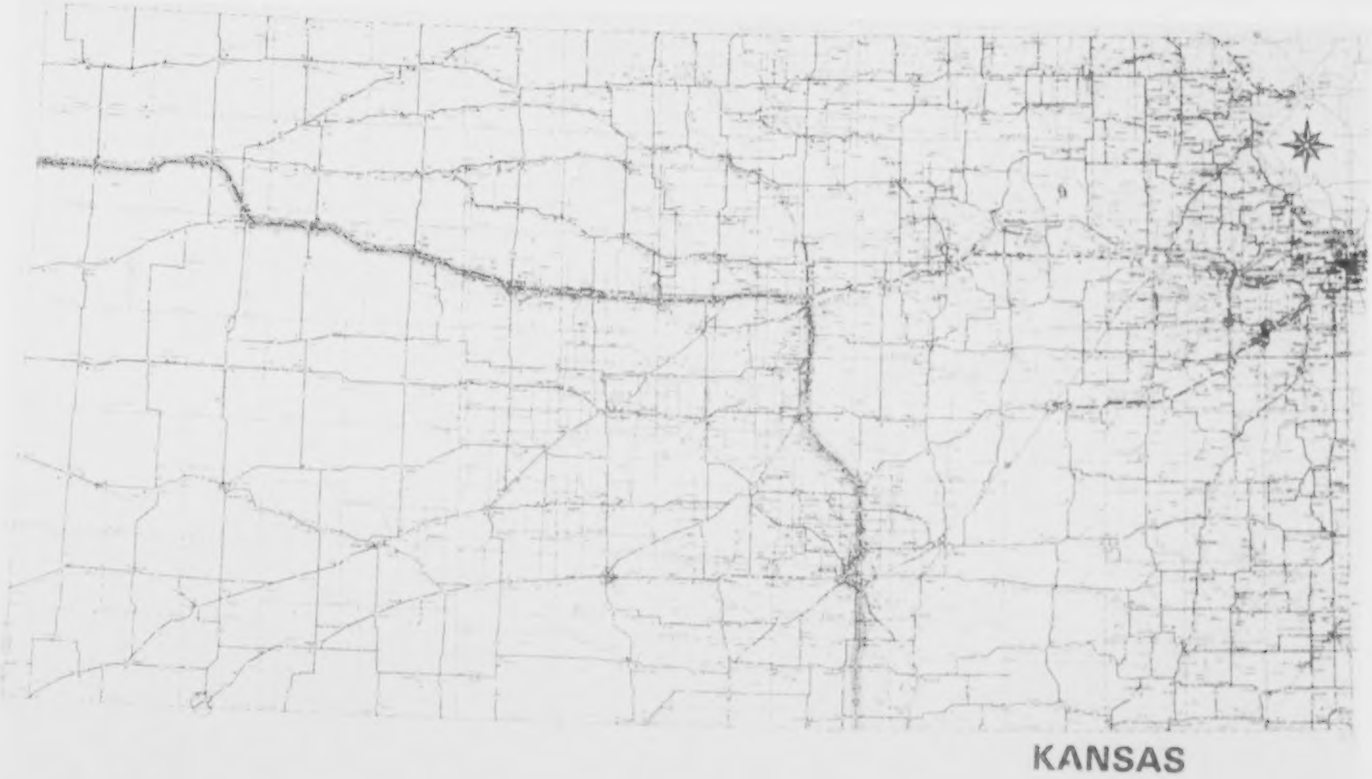
SOUTHERN ILLINOIS

BEST AVAILABLE COPY

BEST AVAILABLE COPY


IOWA
RAIL ROUTE
A-12

BEST AVAILABLE COPY

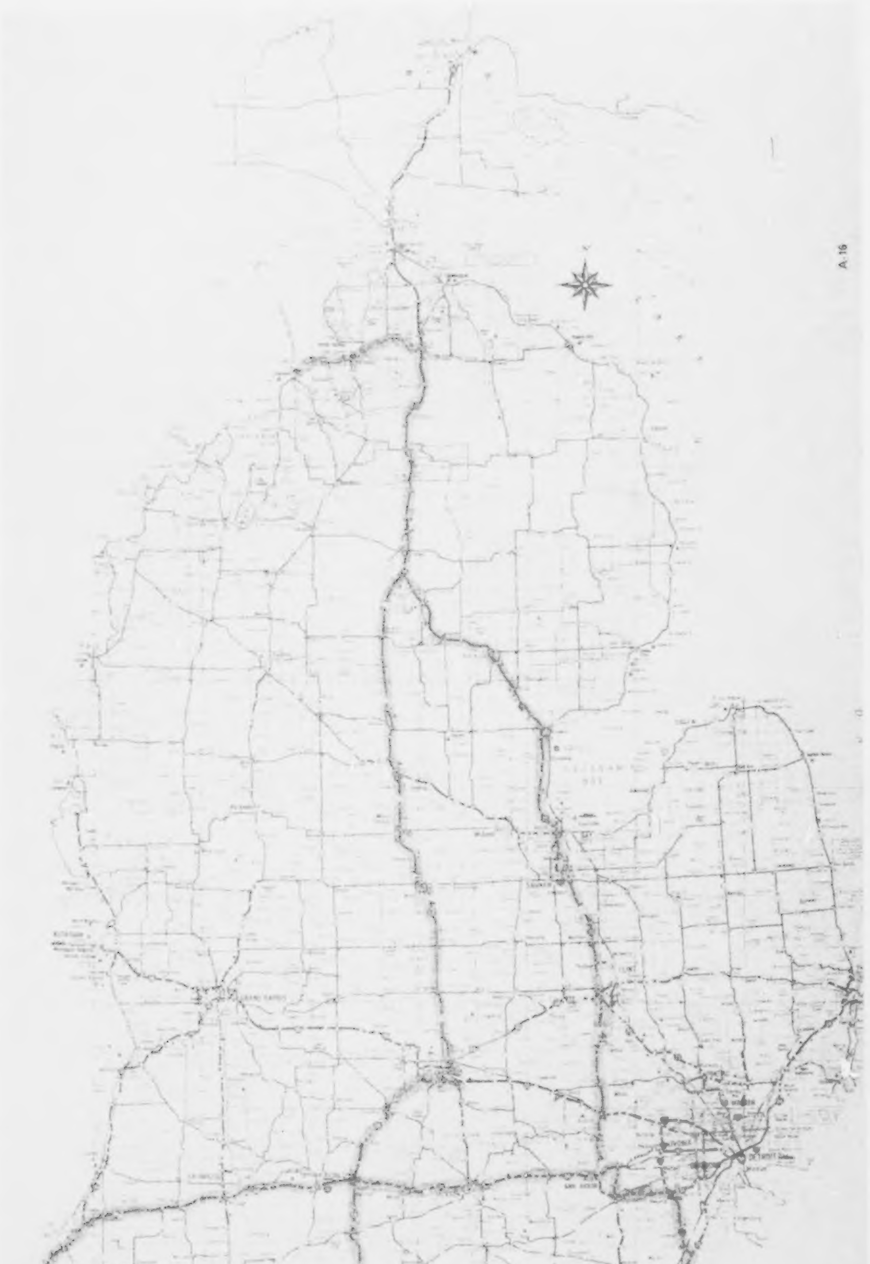


A 13

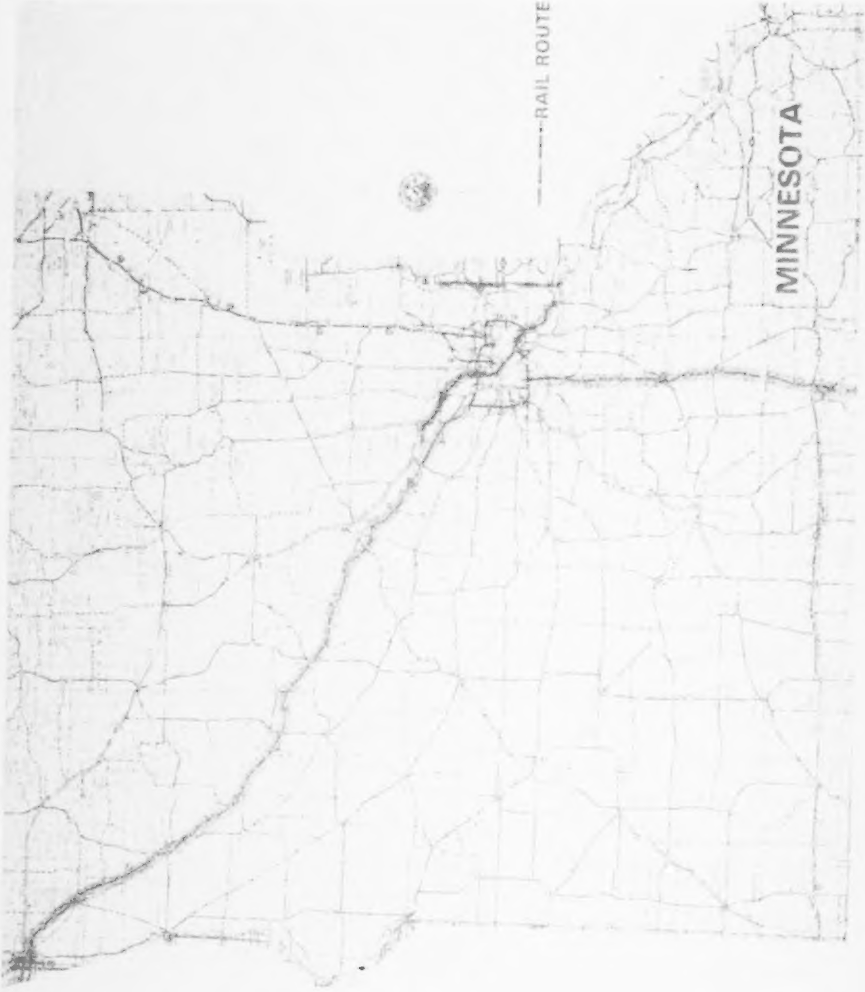
BEST AVAILABLE COPY

MARYLAND

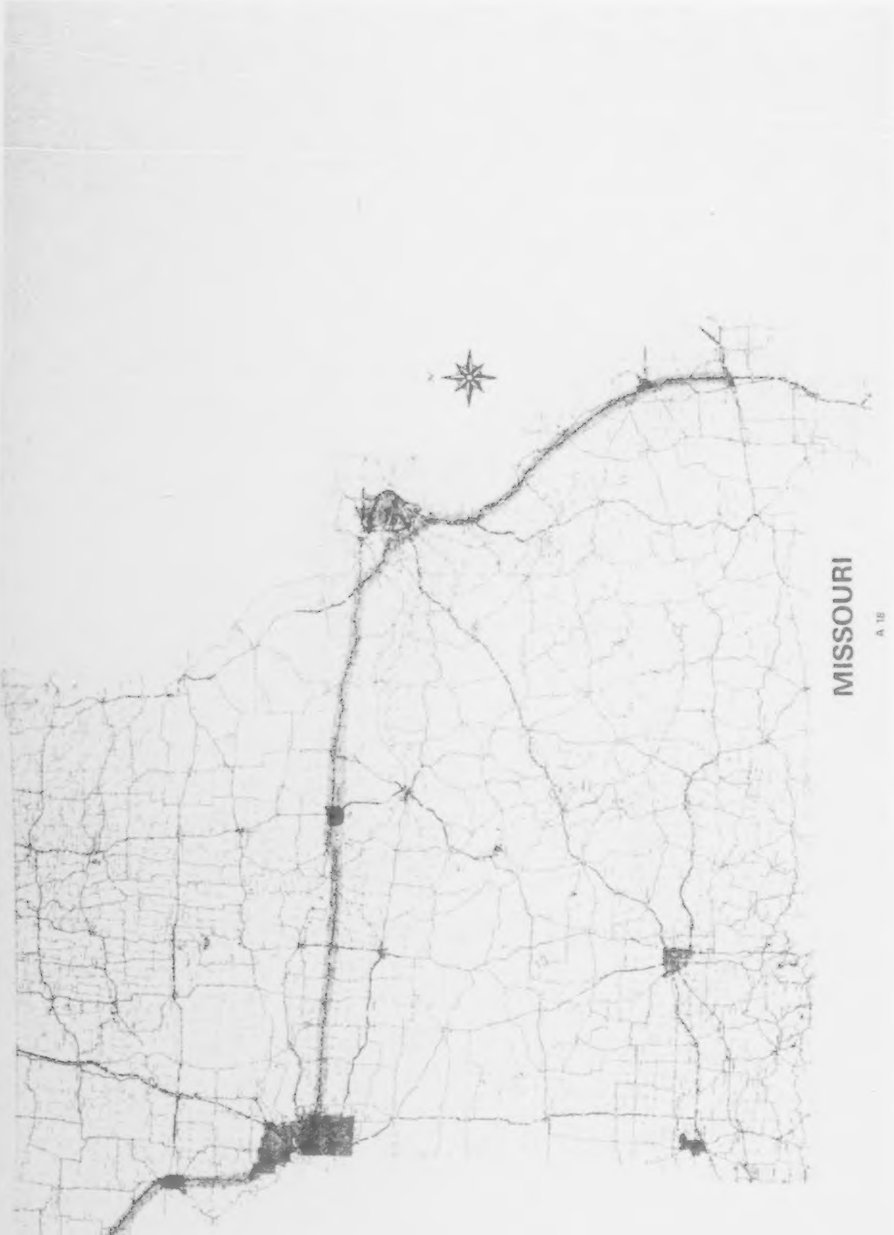
BEST AVAILABLE COPY



BEST AVAILABLE COPY


RAIL ROUTE
MINNESOTA
A-17

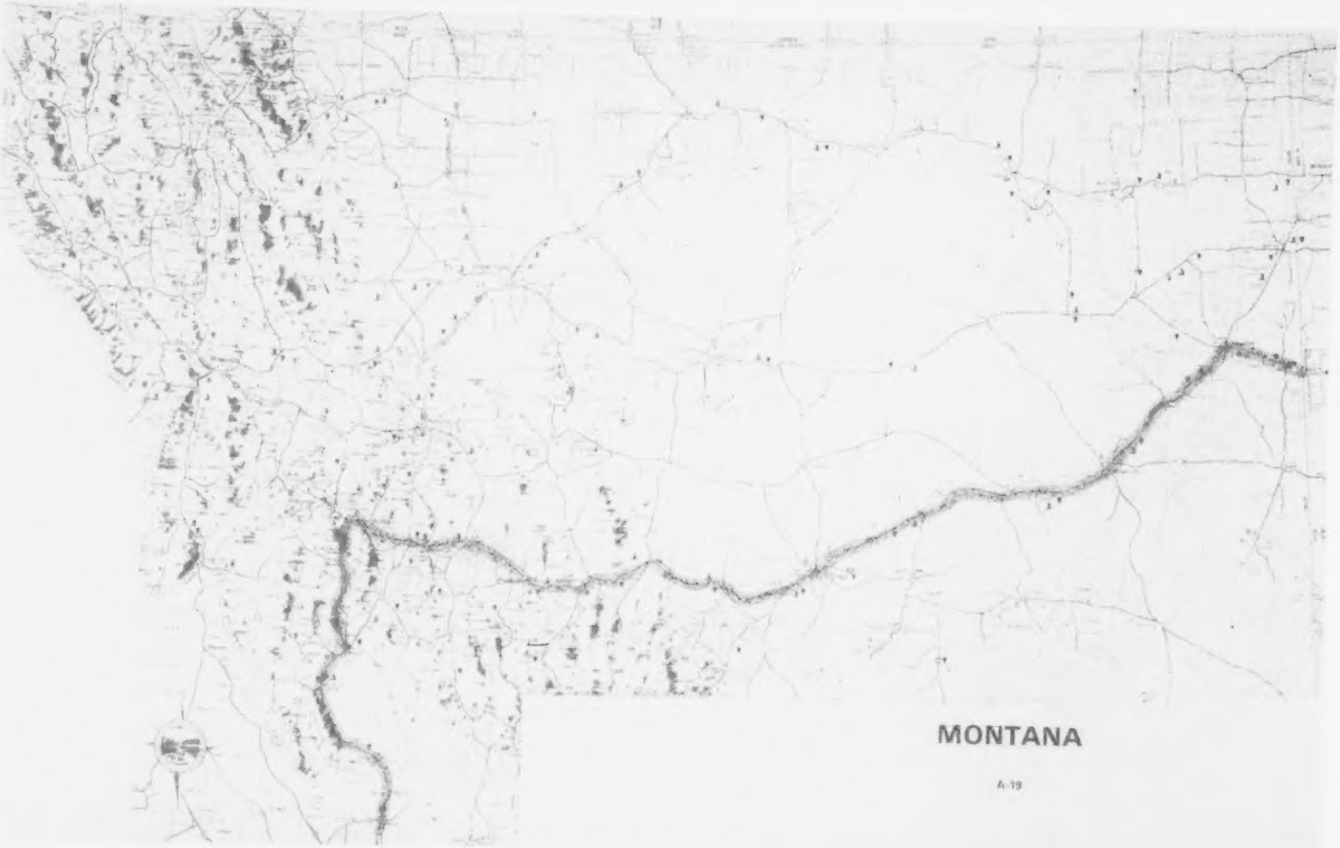
BEST AVAILABLE COPY



MISSOURI

A 18

BEST AVAILABLE COPY


MONTANA
A-19

BEST AVAILABLE COPY

NEBRASKA
RAIL ROUTE

BEST AVAILABLE COPY

NEVADA

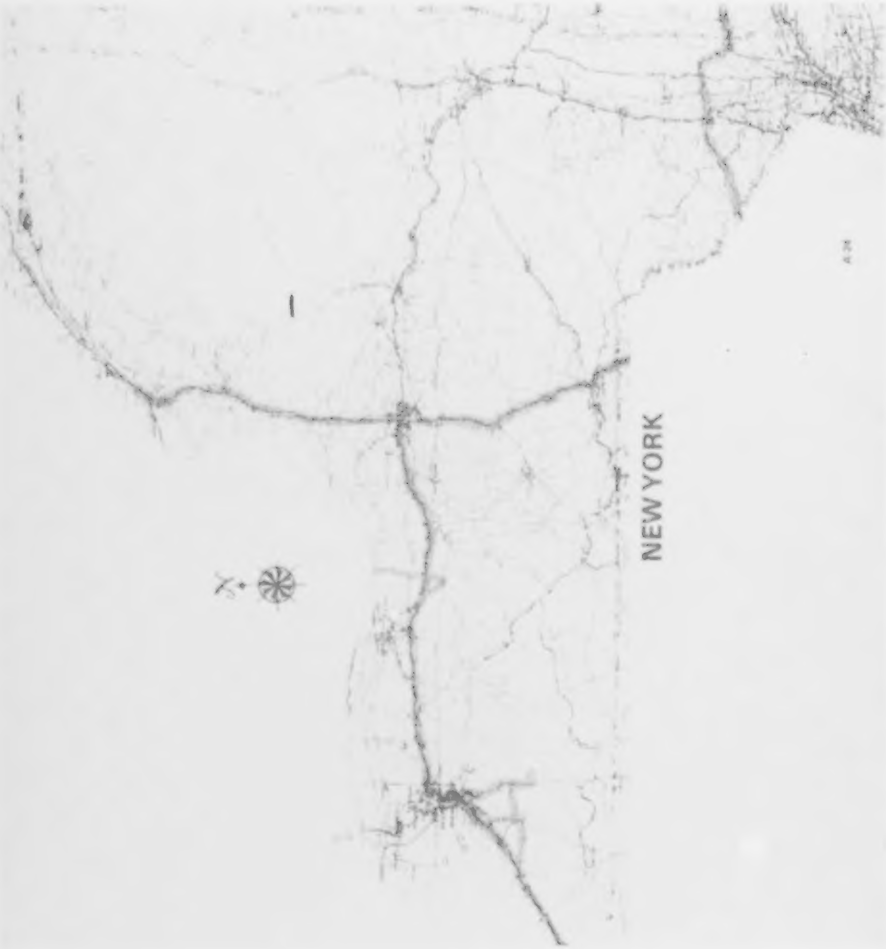
BEST AVAILABLE COPY

NEW JERSEY

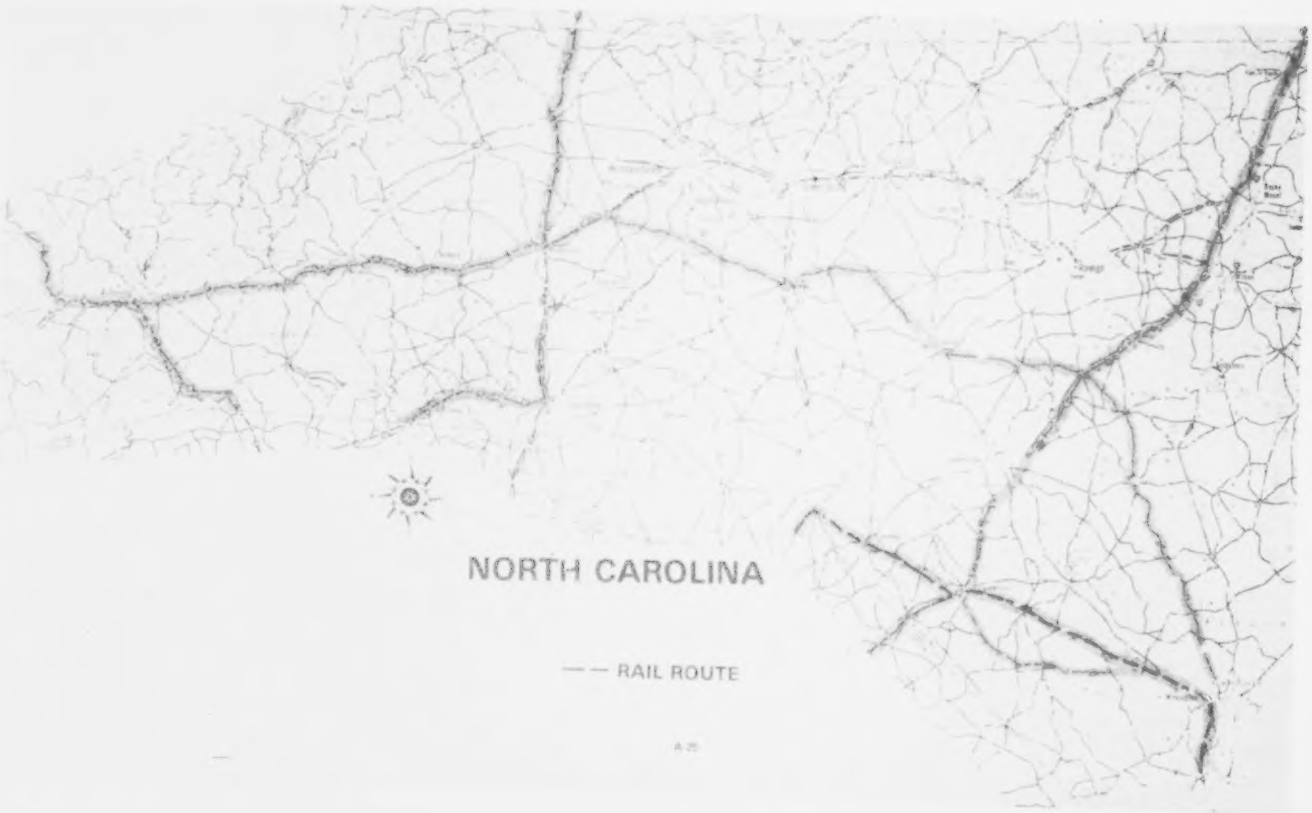
BEST AVAILABLE COPY

NEW MEXICO
A-23

BEST AVAILABLE COPY



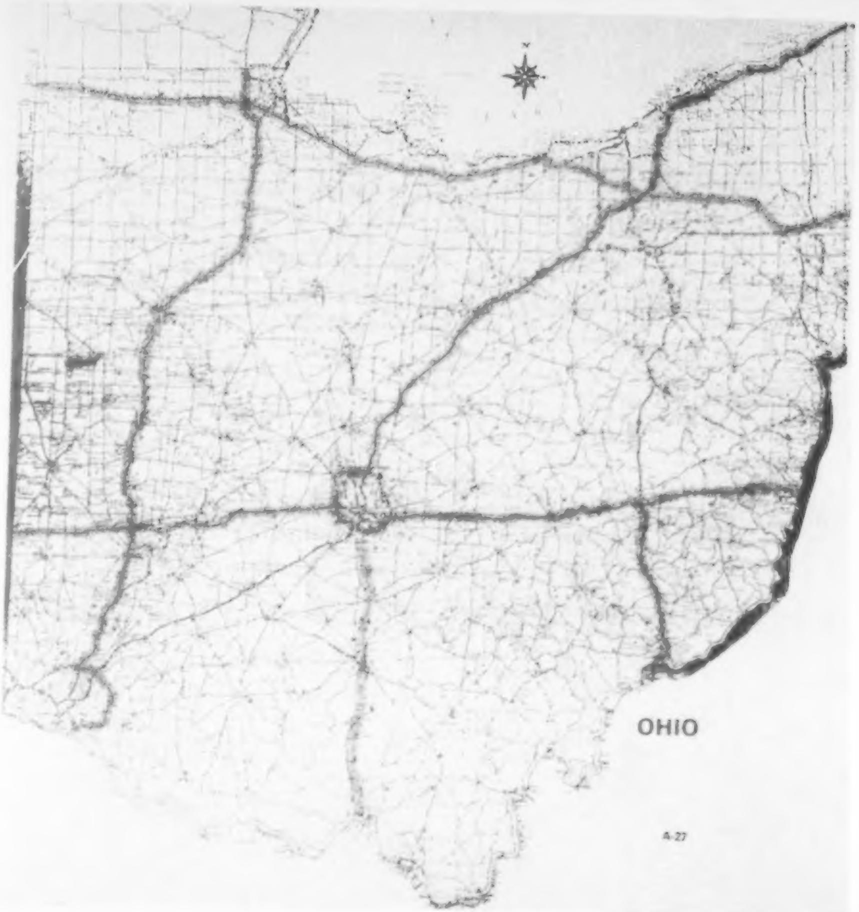
BEST AVAILABLE COPY


NORTH CAROLINA
— — RAIL ROUTE

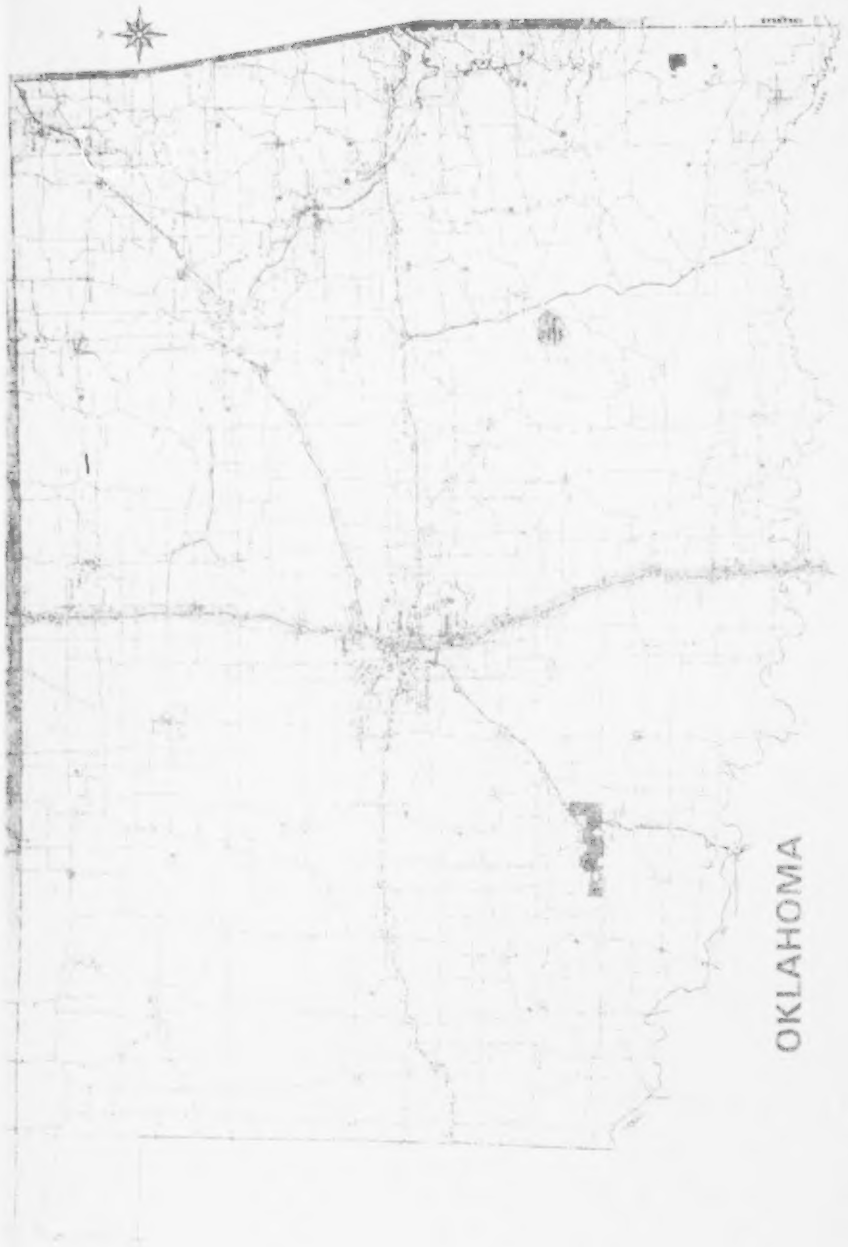
BEST AVAILABLE COPY

NORTH DAKOTA

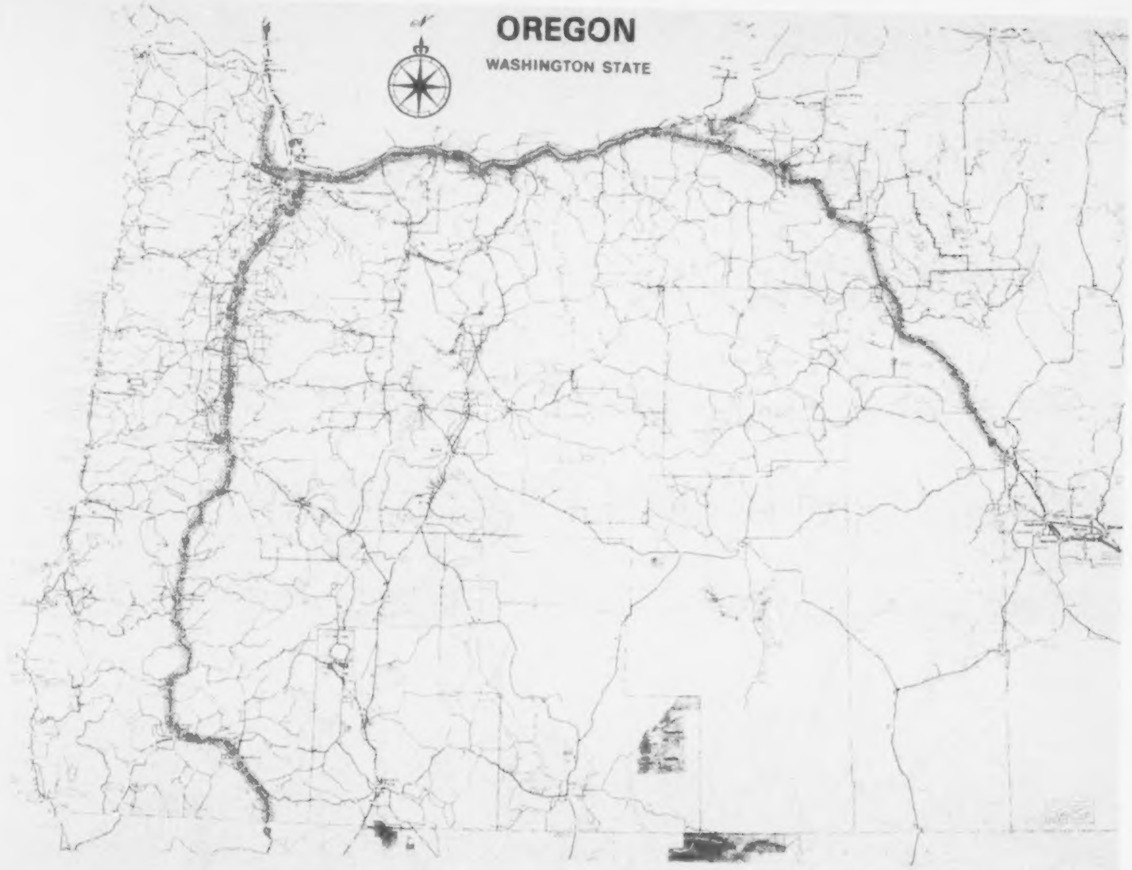
BEST AVAILABLE COPY



BEST AVAILABLE COPY



BEST AVAILABLE COPY


OREGON
WASHINGTON STATE

A-29

BEST AVAILABLE COPY

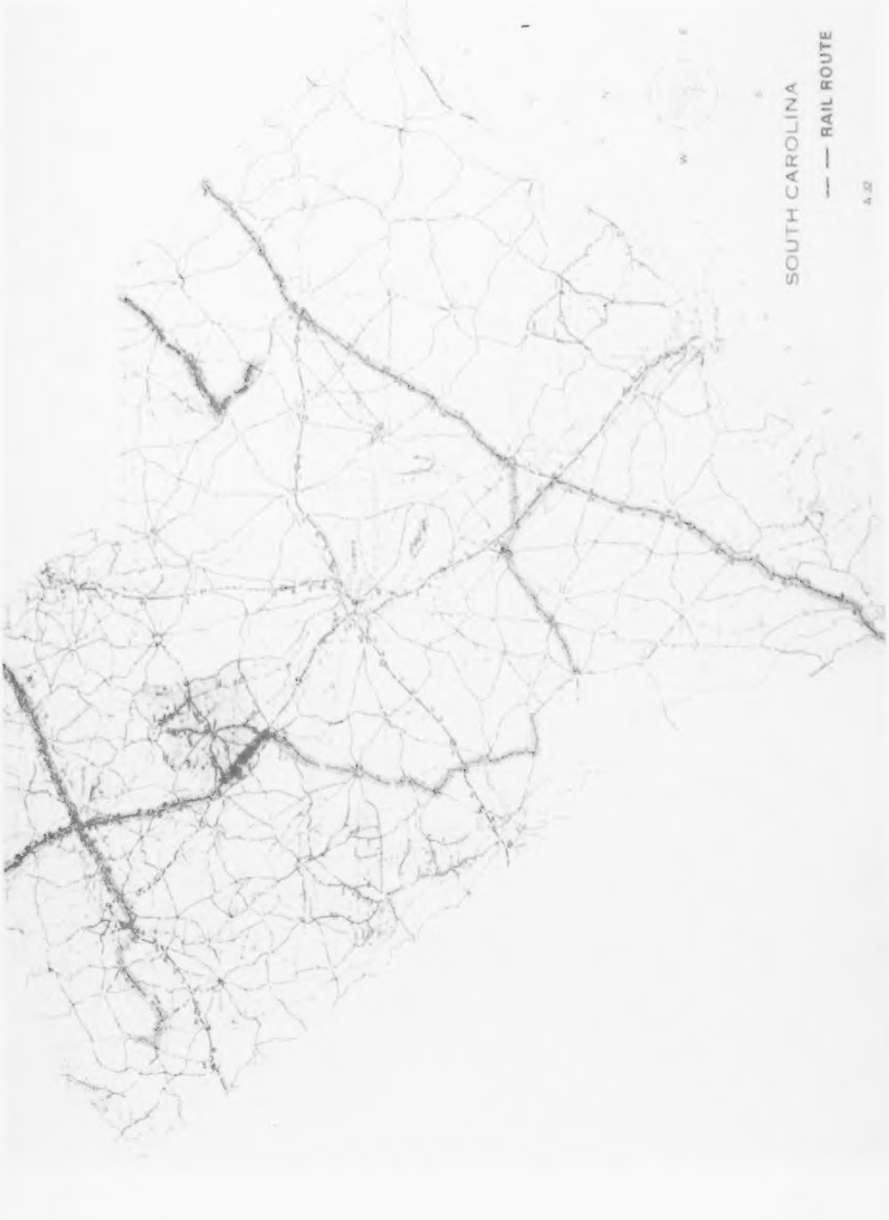
PENNSYLVANIA

A 30

BEST AVAILABLE COPY

RHODE ISLAND
WASHINGTON
RICHMOND
SOUTH
KINGSTOWN
CHARLESTOWN
WESTERLY
EAST GREENWICH
NEWPORT
PORTSMOUTH
MIDDLETOWN
TIVERTON
LITTLE COMPTON
BLOCK ISLAND SOUND
SOUND

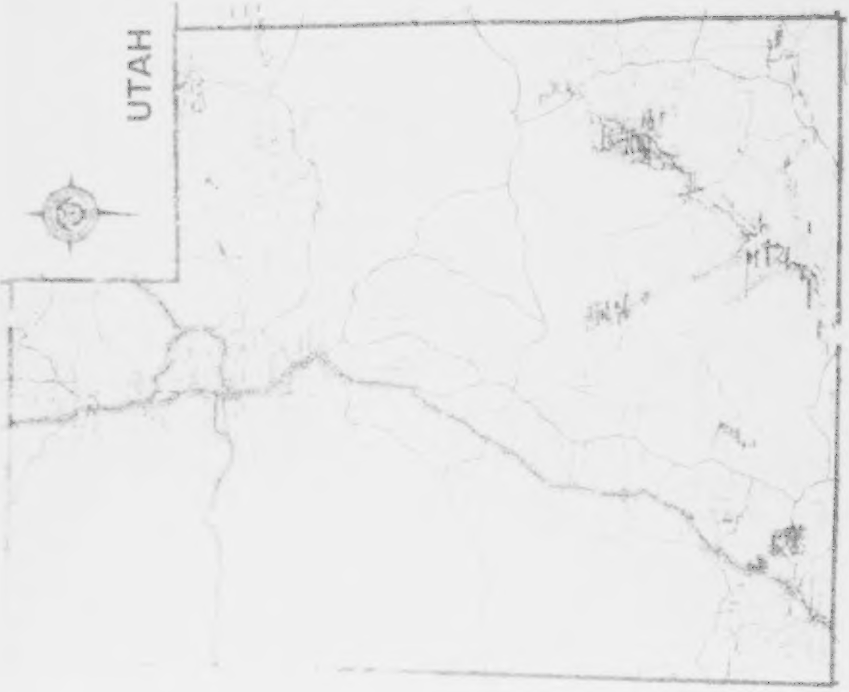
A-31


SOUTH CAROLINA
— — RAIL ROUTE
4.32

BEST AVAILABLE COPY

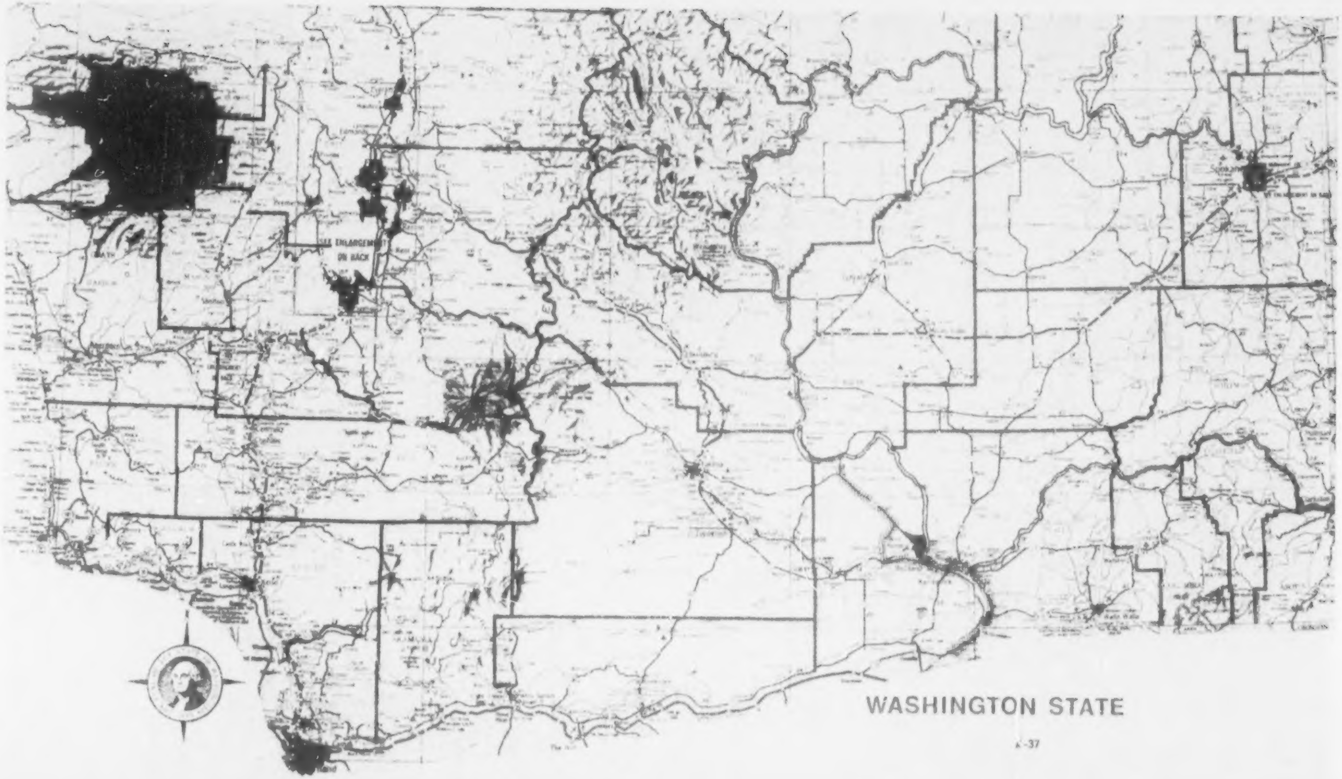
BEST AVAILABLE COPY

BEST AVAILABLE COPY



BEST AVAILABLE COPY

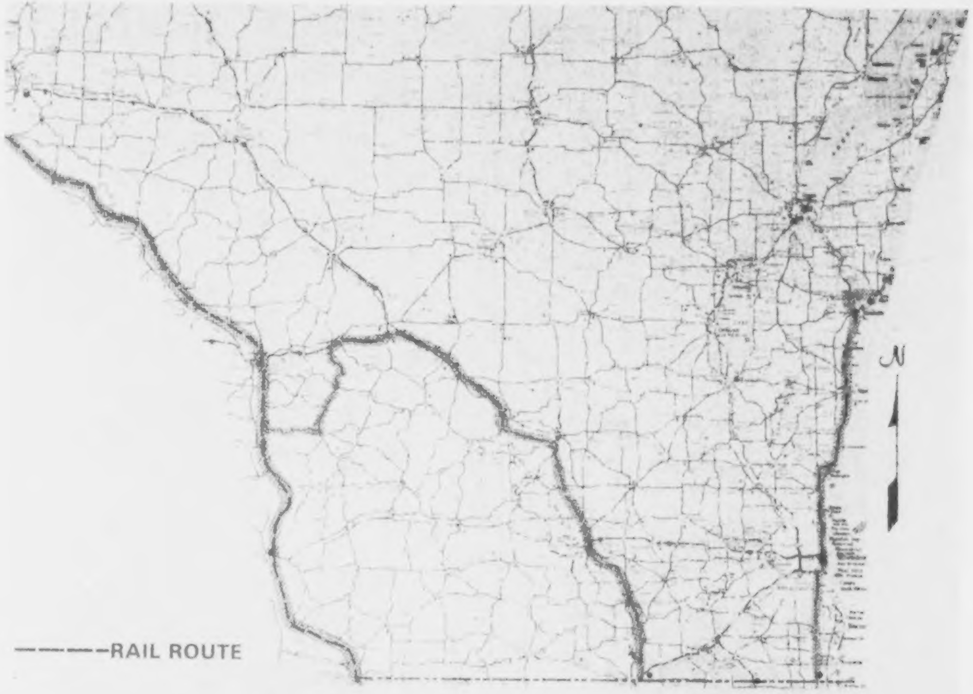
N
VIRGINIA
A-36



SEE ENLARGEMENT ON BACK
WASHINGTON STATE
4-37

WEST VIRGINIA
A-38

BEST AVAILABLE COPY



WISCONSIN

BEST AVAILABLE COPY

WYOMING
YELLOWSTONE NATIONAL PARK
Casper
Cheyenne

A-40

NRC FORM 335
(2-84)
NRCM 1102
3201, 3202

U.S. NUCLEAR REGULATORY COMMISSION

BIBLIOGRAPHIC DATA SHEET

SEE INSTRUCTIONS ON THE REVERSE

1. REPORT NUMBER (Assigned by TIDC, add Vol. No., if any)
NUREG-0725, Rev. 6

2. TITLE AND SUBTITLE
Public Information Circular for Shipments of Irradiated Reactor Fuel

3. LEAVE BLANK

4. DATE REPORT COMPLETED
MONTH: September | YEAR: 1987

5. AUTHOR(S)

6. DATE REPORT ISSUED
MONTH: April | YEAR: 1988

7. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)
Division of Safeguards and Transportation
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

8. PROJECT/TASK/WORK UNIT NUMBER

9. FIN OR GRANT NUMBER

10. SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)
Same as above.

11a. TYPE OF REPORT
Regulatory Report

b. PERIOD COVERED (Inclusive dates)
7/16/79 to 9/30/87

12. SUPPLEMENTARY NOTES
Updates expected to be issued periodically.

13. ABSTRACT (200 words or less)

This circular has been prepared in response to numerous requests for information regarding routes used for the shipment of irradiated reactor (spent) fuel subject to regulation by the Nuclear Regulatory Commission (NRC), and to meet the requirements of Public Law 96-295. The NRC staff must approve such routes prior to their use in accordance with the regulatory provisions of Section 73.37 of 10 CFR Part 73. The information included reflects NRC staff knowledge as of September 30, 1987. Spent fuel shipment routes, primarily for road transportation, but also including three rail routes, are indicated on reproductions of Department of Transportation road maps. Also included are the amounts of material shipped during the appropriate eight-year period that safeguards regulations for spent fuel shipments have been effective. In addition, the Commission has chosen to provide information in this document regarding the NRC's safety and safeguards regulations for spent fuel shipments as well as safeguards incidents regarding spent fuel shipments (of which none have been reported to date). This additional information is furnished by the Commission in order to convey to the public a more complete picture of NRC regulatory practices concerning the shipment of spent fuel than could be obtained by the publication of the shipment routes and quantities alone.

14. DOCUMENT ANALYSIS — a. KEYWORDS/DESCRIPTORS
spent fuel shipment route

b. IDENTIFIERS/OPEN-ENDED TERMS

15. AVAILABILITY STATEMENT
Unlimited

16. SECURITY CLASSIFICATION
(This page) Unclassified
(This report) Unclassified

17. NUMBER OF PAGES

18. PRICE

Mr. **Anderson**. I your statement you say FEMA is responsible for coordinating Federal and State participation in developing emergency response plans. Do you assist FEMA, and do you in any way provide or participate in emergency response training for State and local emergency response personnel?

Mr. **Thompson**. We used to do that. We don't do that any more. After the accident at Three Mile Island, FEMA assumed the responsibility for much of that training. We do, however, conduct exercises—that is, with our Incident Response Center—and as part of those exercises there is a significant amount of training associated with communications with our response center and with the State and local officials. This activity primarily is associated with the nuclear power plants that we have located throughout the United States. Nevertheless, many of those people would be the same individuals called upon to assist the local individuals, and would be the State individuals responsible for responding to an accident involving high-level radioactive waste.

Mr. **Anderson**. Mr. Shaw?

Mr. **Shaw**. Mr. Chairman, I have but one question I would like to direct to Mr. Fisher.

In reading over your testimony, I am most impressed with the exhaustive accounts of your agency's efforts in terms of workshops, seminars, meetings on hazardous material training. If all of these resources are available, why do we hear so many complaining that not enough people are adequately trained?

Mr. **Fisher**. I suppose, Mr. Congressman, that within the existing resources we try to make use of those resources on as broad a base as possible, and we do—again, I would restate—we do most of our work through the National Response Team in our work through the training committee, in trying to develop an overall coordinated approach to deliver training through the grant program and to deliver training in any other mechanisms that we have. Given the base of 1.2 million fire fighters, for example, across the country, I am not sure that we can reach all that need training at any one given time, although we continually strive to work with the other Federal agencies and deliver as many different avenues of training that we possibly can.

Mr. **Shaw**. Thank you.

I have no further questions, Mr. Chairman.

Mr. **Anderson**. Mr. Applegate?

Mr. **Applegate**. Thank you, Mr. Chairman.

Mr. Fisher, I appreciate all of you coming to the committee to answer some questions that are very important to us. You had talked about the fact that you didn't have any money in the budget for training, that no money was requested in the President's budget. The answer to that is, as I understand, that there are budget restraints and that this may have been the reason that there wasn't any money in there. Of course, I could get into all other areas, as to what the President's budget emphasized was the Department of Defense, and yet this is and should be a defense priority on the home front.

But let me ask you this: Did FEMA ask for a specified amount of money for training and/or equipment?

Mr. **Fisher**. I can't answer the one on equipment. There was at one time a particular request for the full amount of $5 million in fiscal year 1989 for training.

Mr. **Applegate**. For $5 million? What kind of training would you get for $5 million?

Mr. **Fisher**. That is what is authorized under Title 3 of the Superfund amendments, Mr. Congressman, and that is the extent of our original request.

Mr. **Applegate**. You are aware——

Mr. **Fisher**. That does not take account of the other budget for the National Emergency Training Center, I might add.

Mr. **Applegate**. Yes. You are aware of my bill, I assume?

Mr. **Fisher**. I am not aware of the particulars of your bill, sir.

Mr. **Applegate**. Okay. Well, we have a provision in that bill. Roughly it totals out to about $136 million for training and equipment for local enforcement officials—fire fighters, for fire trucks, equipment, computer equipment, training, an intensive training program, and also for police, the equipment and the whole bit, and of course at no cost to the taxpayers.

But having said that, let me just go into this: In I think it was February of 1986 the Washington Times published an interview that they had had with General Beckton regarding his priorities as the Director of FEMA, and what he said in this article, and I quote: "Think of the beltway and how frequently a truck flips over and burns with some gas or toxic agent. How do police and firemen recognize what is on the truck? Should they let it burn out? Should they evacuate people? I would like to see fire engines equipped with a cheap computer, something you could buy at Radio Shack." Maybe they mean inexpensive; I don't know. "They could punch in the appropriate code and get a readout on what the substance is and how it should be handled—easy and inexpensive."

That was the end of the quote, and my question and comment is, well, the Director described the system that is called for in my bill, which is H.R. 3334. We contacted the Director to ask for his support, and lo and behold, he wasn't as enthusiastic about the bill as the interview indicated. I would like to know what the agency's position is on the communications system that we have, which includes equipping local law enforcement officers and fire fighting equipment, training, real time computer and storage systems, and to conduct a hazardous materials flow study which would be available in 180 days? Those are just a couple of the things that would be done in that bill. Could you answer that question for me and tell me just exactly what FEMA's position is on my bill?

Mr. **Fisher**. Not being familiar with the particulars of that bill, I am afraid I can't do it here, Mr. Congressman, but I would be more than happy to provide that response for the record.

Mr. **Applegate**. Well, let me ask you this: When you came here today, what did you expect? I mean, what did you think that you were coming to talk about? Were you aware or was FEMA aware that we were going to be discussing various bills, and were they aware that they were going to be talking about H.R. 3334?

Mr. **Fisher**. I was not aware of H.R. 3334. I was aware of 4069.

Mr. **Applegate**. What is 4069?

Mr. **Fisher**. That is the administration's bill.

Mr. **Applegate**. That is all you were interested in?

Mr. **Fisher**. Not the only one I was interested in. It is the only one I have particular information on.

Mr. **Applegate**. That is the one, I think, that Chairman Howard had offered at the request of the administration. Is that correct? Yes.

I just don't understand that, though. I mean, we have—let's see—1, 2, 3, 4, 5, 6, 7, 8, 9, 10 bills. On this paper here I have 10 bills, all having to do with the transportation of hazardous materials. Now it seems to me that when you come in here to talk about it, you would surely come in to talk about more than the administration's bill, which is really a nothing bill in the first place. It is, I think, just sort of a reauthorization bill of what is going on now, but here are a great number of bills which would really do something for the safety of communities and people. Yes?

Mr. **Clark**. If I may, I am Kevin Clark, with Congressional Affairs in FEMA. I believe the conversation between our Office of Congressional Affairs and the subcommittee staff, and also I believe in our letter of invitation, we were not specifically asked to address the merits of any particular bill. We were rather asked to provide testimony on FEMA's overall responsibilities in the hazardous materials area.

Mr. **Applegate**. Well, that is all well and good, and I wasn't necessarily asking for any voluntary testimony, but sure to God you must come in here knowing that there are 10 bills that would be involving FEMA in one way or the other, and you must know something about it.

Mr. **Clark**. As Mr. Fisher indicated, sir, we would be glad to take a look at the language of your bill and to coordinate within the administration to provide some response for you.

Mr. **Applegate**. Well, the reason that I mentioned that is because of the quote that General Beckton made. I thought he was describing my bill, so when I asked him about it or when we asked him about it, he didn't seem to have any enthusiasm. I assume from that that he must have known something about the bill. I just don't understand it. There is no sense in beating a dead horse here, but I was just wondering about what your answer might and whether it was the same as the previous speaker, Ms. Douglass, who said that—her big objection seemed to be on cost, but I am a little dismayed and a little upset by the fact that you don't have any other information. If that is the case, I really don't have any other questions to ask, but I would like to submit some questions to you and I would hope that you would answer those.

Mr. **Fisher**. We would be glad to, sir. Thank you.

Mr. **Anderson**. Would you like those for the record?

Mr. **Applegate**. Yes, absolutely.

Mr. **Anderson**. If you would submit them, then, and have them answered, we would like to have them for the record because we would like to know more about this ourselves.

Mr. **Fisher**. Very well, Mr. Chairman.

Mr. **Anderson**. Mr. Grant.

Mr. **Grant**. Thank you, Mr. Chairman. Just one question of Mr. Makris.

Since the States are now mandated to have hazardous waste disposal sites in each State, can you tell us how current the individual State commissions are with their emergency response strategies? Do you have that information?

Mr. MAKRIS. Well, let me talk about it, if I may, a bit in the generality, and I would hope to be able to talk more about it after we meet with most of those chairmen on the 8th to the 10th of June and get status explicitly on what they are up to.

They are established, they are mostly broad-based, and they are in fact dealing broadly within their States on the requirements for emergency preparedness, looking at the various parts of the law that might require it. What we believe is that it is still a very early program. I mean, the dates required by the law really made a lot of hustle and made it relatively difficult to meet some of these obligations, one of which is to have these plans fully in place by October of 1988.

Where we think the programs really are, is that all commissions are established and functioning. Most local emergency planning committees exist. Some are not yet functioning. Some have completed their plan. The plan in Hopewell, VA, for example, has been completed and exercised, so we are in a variety of different settings, depending upon the State and the local governments.

There also seems to be a big difference among States, some States being very active and some meeting the letter of the law, rather than perhaps dealing with the intent. Similarly, at the local level, some local situations are very strong and some are relatively less aggressive, if you will, in completing these requirements, so I would say it is a mixed bag, and I would be happy, after I deal with almost all the SERC's on the 8th to the 10th of June, to give you a call and we could talk about that.

Mr. GRANT. Well, I would like that a lot. I think it would be totally inappropriate for us to have hazardous waste disposal sites and not have an emergency response strategy, both inter- and intrastate.

Thank you, sir.

Mr. MAKRIS. You are welcome.

Mr. ANDERSON. If there are no further questions, I want to thank the panel for an excellent presentation. I think that one thing I have gotten out of these hearings so far is that a lot of us don't know all the answers. It is a very complicated issue and I want to thank you for your participation. I have learned a lot today; I know that.

[The prepared statements of Mr. Makris, Mr. Fisher, and Mr. Thompson follow:]

STATEMENT OF JAMES L. MAKRIS,
DIRECTOR OF THE PREPAREDNESS STAFF
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SURFACE TRANSPORTATION SUBCOMMITTEE OF
HOUSE PUBLIC WORKS AND TRANSPORTATION COMMITTEE

MAY 25, 1988

Thank you for the opportunity to testify before this committee today. My name is Jim Makris and I am the Director of the Preparedness Staff in the Office of Solid Waste and Emergency Response in the U.S. Environmental Protection Agency. In this position, I am responsible for the chemical preparedness and prevention initiatives of the agency. These responsibilities include the implementation of the Emergency Planning and Community Right to Know Act, (also known as Title III of Superfund Amendments and Reauthorization Act), serving as chair of the National Response Team, and managing programs dealing with prevention of chemical accidents. These responsibilities provide an opportunity to assist in the development of a coordinated and cooperative federal, state and local effort of planning and preparedness for emergency response in the event of an hazardous materials incident.

Transportation incidents involving hazardous materials have many similarities to incidents at fixed facilities. In each case, incidents are primarily responded to by local fire and police; the responders normally do not differ depending upon the source of the incident. The training and information needs are the same, whether the incident is at a fixed site facility or from a transportation vehicle. It may be that transportation industry employees, drivers, handlers, etc. represent a unique audience which requires special assistance and training in meeting their responsibilities in a transportation incident. However, planning and preparation are key to an effective response in the event of any hazardous materials incident, and these key elements do not differ significantly depending upon the incident source. If a community has planned for, and is trained to respond and deal with a chemical release from a fixed facility, it is well on its way to being fully able to handle a transportation incident. As long as there is a competent infrastructure in place, emergency response will be effective. The Emergency Planning and Community Right to Know Act, passed by Congress in October, 1986 establishes that infrastructure -- an intricate state and local network to provide for that planning and preparation. This infrastructure includes assistance in training and developing information sources for local communities in responding to hazardous materials incidents. While this work has just begun, it is critical that initiatives involving hazardous materials training and response be linked to that structure.

Briefly, let me give you an overview of Title III. The Act envisages a unique partnership between the federal, state and local governments and the community in this area. Under the Act the states have established State Emergency Response Commissions

(SERCs), which are responsible for coordinating preparedness activities throughout the state. The SERCs in turn have designated local planning districts and have appointed local emergency planning committees (LEPCs) which are representative of the many sectors of the local community which should be involved in emergency planning -- police, fire, emergency managers, health and medical personnel and facilities are only some of the representative groups. The Act establishes a reporting network designed to provide information to these LEPCs which will allow them to plan and coordinate the response to emergencies. It requires facilities covered by the act to report the presence of Extremely Hazardous Substances (listed under the Act) and other hazardous substances to the SERC and the LEPC, so that communities can determine what chemicals are in their midst and develop an emergency plan which is responsive to that information. The extremely hazardous substances represent acutely toxic chemicals which may represent a significant danger to the community in the event of a release and thus are recommended as priorities for developing response plans.

Title III also establishes an emergency notification process to states and locals. This notification is required in the event of a release of a specific quantity of either the Extremely Hazardous Substances or hazardous substance listed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA/Superfund). This state and local reporting requirement builds upon the Superfund requirement for reporting releases of listed hazardous substances to the National Response Center.

In establishing these various reporting and planning requirements, the Congress recognized that these functions are ultimately a local responsibility, with coordination and assistance from the state. Given the nature and variety of hazardous materials incidents, the federal government's role is limited. It provides a national response capability to assist State and local responders on request and to respond to situations that exceed State and local capabilities. This federal system is described in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). It establishes three organization levels: the National Response Team (NRT), Regional Response Teams (RRTs) and On-Scene Coordinators (OSCs). The NRT consists of fourteen federal agencies with interest and expertise in emergency response. There are thirteen RRTs, one for each federal region plus one each for Alaska, the Caribbean and the Pacific Basin. Like the NRT, RRTs are planning, policy and coordinating bodies, and do not respond directly to incidents. However, in their coordinating responsibility, RRTs have direct access to various federal and State assets which can be efficiently applied to the response efforts. The OSC is the federal official who coordinates all federal containment, removal and disposal efforts and resources during an incident.

He is also the point of contact for the coordination of federal efforts with those of the local response community. Among the resources available to the OSC in an incident response is the EPA's Emergency Response Team (ERT). Its capabilities include hazard evaluation, environmental assessment, monitoring and technical support to the OSC. Under Title III, the primary role of the federal government is to develop regulations and appropriate enforcement mechanisms, and to provide guidance, technical assistance and training through the SERCs established under Title III.

While the transportation of identified substances are not covered by most of the reporting requirements of Title III, the planning process specified in the Act is intended to be comprehensive and includes planning for transportation incidents. Transportation incidents must also be reported under the emergency notification section which I previously noted. Title III further requires that 1) transportation representatives must be included on the planning committee and 2) the local plan must identify routes likely to be used for transportation of extremely hazardous substances so that these hazards can be addressed. EPA and other federal agencies have encouraged Governors to include transportation representatives on the State Emergency Response Commissions. Furthermore, planning technical guidance, including the Hazardous Materials Emergency Planning Guide (NRT-1), issued by the National Response Team and the Technical

Guidance for Hazards Analysis, prepared by EPA, DOT and FEMA, address hazardous materials in transportation as well as hazards posed by fixed facilities. The Technical Guidance document is now being expanded and will be available this year, to address hazardous materials other than the extremely hazardous substances listed under Title III, again including guidance on planning for transportation incidents as well as fixed site hazards.

Under Title III, the Federal Emergency Management Agency (FEMA), in coordination with EPA has provided training grants to the SERCs to improve state and local emergency planning, preparedness, mitigation, response, and recovery capabilities. These training grants can be used for attending courses sponsored by FEMA, EPA, the Department of Transportation (DOT) and other federal as well as approved state courses. The federal courses address planning and response to transportation incidents, as well as fixed facilities incidents.

EPA develops and presents training courses in safety and technical operations related to hazardous materials responses. The training program began as a means to train EPA personnel responsible for working in hazardous field situations, but has rapidly expanded to include other Federal agencies, state and local government personnel and private industry. EPA trains approximately 5500 students each year, over half of which are state and local personnel. FEMA conducts hazardous materials-related training at the National Emergency Training Institute in Emmitsburg, MD for federal, state and local personnel. EPA-FEMA-DOT have jointly produced a training program in hazardous materials contingency planning which is given by the Emergency Management Institute in Emmitsburg. EPA, Coast Guard, FEMA and the Regional Response Teams created under the National Contingency Plan also work with local hazmat teams to produce full-field accident simulations to exercise response team plans. Many of these simulations involve incidents in transportation corridors. As you can see, structures are already in place which are addressing concerns of emergency planning and response. Any initiatives in the emergency planning and response area should be linked to these efforts and activities need to be directed toward strengthening and expanding these on-going efforts rather than duplicating them.

As I initially stated, the planning, training and exercising efforts which are required to adequately respond to a hazardous materials incident, do not differ significantly, whether responding to a transportation incident or fixed facility. The responders need early warning in the event of an incident, they must have knowledge of the chemicals involved, they must have the appropriate equipment for the response, they must have been trained to deal with the incident they are facing and they must be able to call upon others in the event the incident exceeds their capabilities. The planners and responders also must have an overall awareness of chemicals -- what they are and what they are not! The mystery of chemicals must be removed. Title III establishes a structure for meeting these needs of the responder, whether or not the incident is transportation-related or confined to a fixed site, or some combination of these problems. Training and response initiatives should build upon this structure to ensure adequate capabilities to provide emergency response to hazardous materials incidents, including those incidents in transportation.

Again, I thank you for the opportunity to present these views to your committee in the consideration of these many bills relating to hazardous materials transportation emergencies.

STATEMENT OF

DENZEL L. FISHER, EMERGENCY MANAGEMENT SPECIALIST
TECHNOLOGICAL HAZARDS DIVISION
FEDERAL EMERGENCY MANAGEMENT AGENCY

BEFORE THE

HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON SURFACE TRANSPORTATION

MAY 25, 1988

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, I AM PLEASED TO APPEAR BEFORE THIS SESSION OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION TODAY TO DISCUSS THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S HAZARDOUS MATERIALS PROGRAM.

OVERVIEW OF FEMA'S HAZARDOUS MATERIALS PROGRAM

THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S HAZARDOUS MATERIALS (HAZMAT) PROGRAM INVOLVES WORKING WITH FEDERAL, STATE, AND LOCAL GOVERNMENTS AND THE PRIVATE SECTOR TO PROVIDE GUIDANCE, DELIVER TECHNICAL ASSISTANCE, FACILITATE INFORMATION SHARING, AND PROMOTE INTERAGENCY COORDINATION IN THE AREAS OF EMERGENCY PREPAREDNESS (PLANNING, TRAINING, EXERCISING); RESPONSE; AND MITIGATION. THE OVERALL GOAL OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) HAZMAT PROGRAM IS TO REDUCE THE FREQUENCY AND SEVERITY OF HAZMAT EMERGENCIES THROUGH ENHANCED FEDERAL, STATE, LOCAL, AND PRIVATE SECTOR CAPABILITIES.

THE FEMA HAZARDOUS MATERIALS PROGRAM COVERS PREPAREDNESS FOR ALL TYPES OF INCIDENTS -- THOSE IN TRANSIT (HIGHWAY, WATERWAY, RAIL, AND AIR) AND THOSE AT FIXED FACILITIES (MANUFACTURING, PROCESSING, STORAGE, AND DISPOSAL). FROM AN EMERGENCY PREPAREDNESS AND RESPONSE PERSPECTIVE, HAZARDOUS MATERIALS TRANSPORTATION AND FIXED FACILITIES INCIDENTS ARE NOT THAT DIFFERENT. FOR EXAMPLE, FIRST RESPONDERS AT THE SCENE OF AN INCIDENT ARE GENERALLY THE SAME, I.E., FIREFIGHTERS AND LAW ENFORCEMENT OFFICIALS.

FEMA'S HAZMAT PROGRAM FITS IN WITH ITS "ALL-HAZARD" APPROACH TO EMERGENCY MANAGEMENT. THAT APPROACH RECOGNIZES THE ECONOMIES IN USING A SINGLE

INTEGRATED EMERGENCY OPERATIONS PLAN FOR THE COMMON RESPONSE FUNCTIONS ASSOCIATED WITH ALL TYPES OF EMERGENCIES.

THE OFFICE OF NATURAL AND TECHNOLOGICAL HAZARDS PROGRAMS AT FEMA HEADQUARTERS ESTABLISHES OVERALL POLICY AND GENERAL PROCEDURES FOR THE HAZARDOUS MATERIALS PROGRAM. IT IS THE PRINCIPAL FEMA OFFICE FOR ADMINISTERING THE HAZARDOUS MATERIALS PROGRAM. THE OFFICE OF TRAINING (WHICH INCLUDES THE EMERGENCY MANAGEMENT INSTITUTE AND NATIONAL FIRE ACADEMY) DEVELOPS AND DELIVERS TRAINING COURSES ON HAZARDOUS MATERIALS. THAT OFFICE IS ALSO RESPONSIBLE FOR ADMINISTERING THE $5 MILLION IN TRAINING FUNDS AUTHORIZED UNDER TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA), WHICH IS COMMONLY KNOWN AS THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT. FEMA'S U.S. FIRE ADMINISTRATION CONDUCTS RESEARCH AND RELATED EFFORTS TO REDUCE THE NATION'S FIRE AND HAZARDOUS MATERIALS INCIDENT LOSSES. FINALLY, THE OFFICE OF DISASTER ASSISTANCE PROGRAMS PROVIDES ADVICE AND ASSISTANCE IN COORDINATING RELOCATION ASSISTANCE IN DESIGNATED INCIDENTS FUNDED UNDER SUPERFUND.

THE TEN FEMA REGIONAL OFFICES ARE RESPONSIBLE FOR THE ACTUAL IMPLEMENTATION OF THE HAZARDOUS MATERIALS PROGRAM IN THE FIELD, WORKING CLOSELY WITH STATE AND LOCAL GOVERNMENTS. REGIONAL OFFICE PROGRAM STAFF PROVIDE TECHNICAL ASSISTANCE IN AREAS SUCH AS EMERGENCY PLANNING, ALERTING AND WARNING, AND EXERCISING; INTERPRET FEDERAL HAZMAT PLANNING GUIDANCE; REVIEW LOCAL EMERGENCY PLANS UPON REQUEST; KEEP UP TO DATE ON AVAILABLE FEDERAL HAZMAT TRAINING COURSES, VIDEOTAPES, AUDIOVISUAL MATERIALS, ETC.; SERVE AS A REGIONAL "CLEARINGHOUSE" FOR HAZMAT INFORMATION; AND

PROVIDE OUTREACH THROUGH WORKSHOPS, SEMINARS, AND TELECONFERENCES. REGIONAL STAFF ALSO PROVIDE EXPERT ADVICE ON HAZMAT PRACTICES, METHODS, CONCEPTS, AND STRATEGIES. AN EXAMPLE OF ONE REGIONAL OFFICE'S INITIATIVE IS THE SUCCESS OF THE SAN FRANCISCO REGIONAL HAZMAT LENDING LIBRARY. IN A 6-MONTH PERIOD, THE LIBRARY MADE OVER 750 LOANS OF EDUCATIONAL/TRAINING MATERIALS TO OVER 350 USERS.

MUCH OF FEMA'S HAZMAT PROGRAM IS ACCOMPLISHED THROUGH THE NATIONAL RESPONSE TEAM (NRT) AND REGIONAL RESPONSE TEAMS (RRTS). THE NRT IS A NATIONAL BODY COMPOSED OF 14 FEDERAL AGENCIES FOR COORDINATING PREPAREDNESS AND RESPONSE ACTIONS RELATED TO OIL DISCHARGES AND HAZARDOUS MATERIALS RELEASES. A MAJORITY OF THE WORK OF THE NRT IS CARRIED OUT BY COMMITTEES, INCLUDING THE PREPAREDNESS, TRAINING, MANAGEMENT, AND COMPUTER APPLICATIONS COMMITTEES. FEMA CHAIRS THE PREPAREDNESS COMMITTEE AND IS AN ACTIVE MEMBER OF ALL THE OTHER COMMITTEES.

THE RRTS, FIELD COUNTERPARTS OF THE NRT, ARE LOCATED IN THE TEN STANDARD FEDERAL REGIONS PLUS ALASKA, THE CARIBBEAN, AND THE PACIFIC BASIN. FEMA REGIONAL OFFICE HAZMAT PROGRAM STAFF ARE ACTIVELY INVOLVED IN RRT PREPAREDNESS AND RESPONSE INITIATIVES. IN THE EVENT OF AN ACTUAL RESPONSE, FEMA PROVIDES ASSISTANCE IN ANY TEMPORARY OR PERMANENT RELOCATION FROM AN INCIDENT SITE.

FEDERAL AGENCY COORDINATION

FEMA WORKS CLOSELY WITH THE DEPARTMENT OF TRANSPORTATION/RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION (DOT/RSPA) AND THE ENVIRONMENTAL PROTECTION AGENCY (EPA) -- THE TWO FEDERAL AGENCIES WITH MAJOR REGULATORY RESPONSIBILITY FOR

HAZARDOUS MATERIALS. FEMA AND DOT SUBMITTED A REPORT TO THE CONGRESS IN JULY OF 1986 ENTITLED "HAZARDOUS MATERIALS TRAINING, PLANNING, AND PREPAREDNESS." IN THAT REPORT, THE TWO AGENCIES CONCLUDED THAT STATE AND LOCAL GOVERNMENTS HAVE MADE CONSIDERABLE PROGRESS IN IMPROVING THEIR PREPAREDNESS CAPABILITIES TO DEAL WITH HAZARDOUS MATERIALS INCIDENTS AND THAT THE FEDERAL GOVERNMENT AND PRIVATE SECTOR HAVE PROVIDED SUBSTANTIAL OPERATIONAL SUPPORT TO ASSIST IN THOSE EFFORTS. THE REPORT FURTHER CONCLUDED, HOWEVER, THAT THE FEDERAL GOVERNMENT CAN DO MORE TO DELIVER UNIFORM ASSISTANCE IN SUPPORT OF STATE AND LOCAL HAZARDOUS MATERIALS TRAINING, PLANNING, AND PREPAREDNESS.

SINCE SUBMITTING THE REPORT, A NUMBER OF CONGRESSIONAL AND FEDERAL AGENCY ACTIONS HAVE TAKEN PLACE AFFECTING THE OVERALL FEDERAL HAZARDOUS MATERIALS PROGRAM. THE MOST FAR-REACHING ACTION WAS PASSAGE OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA). TITLE III OF SARA, KNOWN AS THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT, ADDRESSES MANY OF THE CONCERNS RAISED IN THE DOT-FEMA REPORT.

FOLLOWING ON THE REPORT, FEMA AND DOT ENTERED INTO A MEMORANDUM OF UNDERSTANDING (MOU) IN APRIL 1987. THE MOU ESTABLISHES JOINT INITIATIVES DEALING WITH PLANNING, TRAINING, AND INFORMATION EXCHANGE.

FEMA IS COLLABORATING WITH DOT IN DEVELOPING AND OPERATING A NATIONAL HAZARDOUS MATERIALS INFORMATION EXCHANGE (HMIX) WHICH PROVIDES UP-TO-DATE INFORMATION ON FEDERAL HAZMAT TRAINING COURSES AND MATERIALS, REGIONAL PUBLIC AND PRIVATE SECTOR HAZMAT ACTIVITIES, UPCOMING EVENTS AND MEETINGS, RECENT LEGISLATION AND REGULATIONS, AND ORGANIZATIONAL RESOURCES. THE HMIX ALSO FEATURES CURRENT "NEWS BULLETINS" AND ALLOWS USERS TO COMMUNICATE INTERACTIVELY BY LEAVING MESSAGES FOR ONE ANOTHER. INFORMATION IS AVAILABLE IN TWO WAYS: (1) THROUGH AN ELECTRONIC BULLETIN BOARD ACCESSIBLE WITH A PERSONAL COMPUTER HAVING COMMUNICATIONS CAPABILITY AND (2) THROUGH A TOLL-FREE TELEPHONE CALL. SOME 2,000+ INDIVIDUALS REPRESENTING THE HAZMAT COMMUNITY NATIONWIDE ACTIVELY USE THE EXCHANGE.

FEMA AND DOT COSPONSORED A WORKSHOP IN FEBRUARY 1988 TO DISCUSS ISSUES RELATED TO EMERGENCY PREPAREDNESS FOR AND RESPONSE TO HAZARDOUS MATERIALS TRANSPORTATION INCIDENTS. THE WORKSHOP FOCUSED ON ASSESSING STATE AND LOCAL RESPONSE NEEDS AND THE AVAILABILITY OF FUNDS TO MEET THOSE NEEDS. ATTENDEES INCLUDED SELECTED FEDERAL/STATE/LOCAL GOVERNMENT AND TRADE ASSOCIATION REPRESENTATIVES. RECOMMENDATIONS MADE AT THE WORKSHOP WILL PROVIDE A BASIS FOR FORMULATING FEDERAL POLICY CHANGES AND PRIORITIZING PROGRAM INITIATIVES RELATED TO HAZARDOUS MATERIALS TRANSPORTATION.

ANOTHER AREA OF FEMA-DOT INVOLVMENT IS IN THE PRODUCTION OF "ROLL CALL" VIDEOTAPES FOR FIRST RESPONDERS. THESE 15-MINUTE VIDEOS COVER THE IDENTIFICATION OF HAZARDOUS MATERIALS, ASSESSING VULNERABILITY AT THE SCENE OF AN INCIDENT, HAZMAT EMERGENCY RESPONSE, AND HEALTH CONSIDERATIONS SUCH AS DECONTAMINATION.

FEMA IS INTEGRATING THE U.S. COAST GUARD'S HAZARDOUS CHEMICAL ASSESSMENT SYSTEM (HACS), A COMPUTERIZED PROGRAM CONTAINING CHEMICAL-SPECIFIC DATA, WITH FEMA'S INTEGRATED EMERGENCY MANAGEMENT INFORMATION SYSTEM (IEMIS), A MULTI-HAZARD

APPROACH TO PREPAREDNESS, MITIGATION, RESPONSE, AND RECOVERY. THE MERGING OF THESE TWO SYSTEMS WILL CREATE COMPATIBLE AND OPERATIONAL SOFTWARE FOR USE BY THE EMERGENCY MANAGEMENT COMMUNITY IN PLANNING FOR AND RESPONDING TO A HAZMAT INCIDENT. HACS WILL PROVIDE A LISTING OF CHEMICALS AND THEIR PROPERTIES, WHILE IEMIS WILL PROVIDE EVACUATION AND TRAFFIC CONTROL DATA.

EACH YEAR THE DEPARTMENT OF TRANSPORTATION SPONSORS A SERIES OF REGIONAL WORKSHOPS FOR STATES, INDIAN TRIBES, AND OTHER FEDERAL AGENCIES INVOLVED IN THE TRANSPORTATION OF RADIOACTIVE MATERIALS (TRANSRAM). THE PURPOSE OF THESE WORKSHOPS IS TO EXCHANGE INFORMATION ON THE TYPES OF MATERIALS BEING TRANSPORTED AND FUTURE ACTIVITIES REGARDING TRANSPORTATION. THE WORKSHOPS ALSO SERVE TO IDENTIFY SPECIFIC TRANSPORTATION PROGRAM AREAS FOR COOPERATIVE EFFORTS AND TO IDENTIFY STEPS TO ASSURE THAT PROGRAM COORDINATION IS TAKING PLACE. FEMA PARTICIPATES AS A COOPERATING AGENCY IN THESE WORKSHOPS BY PROVIDING AN OVERVIEW OF THE AGENCY'S ROLE IN THE TRANSPORTATION OF RADIOACTIVE MATERIALS.

THE DEPARTMENT OF TRANSPORTATION ALSO SPONSORS, IN CONJUNCTION WITH THE TRANSRAM WORKSHOPS, WORKSHOPS FOR STATES, INDIAN TRIBES, AND OTHER FEDERAL AGENCIES ON COOPERATIVE PROGRAMS FOR THE ENFORCEMENT OF HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS. FEMA PROVIDES AN OVERVIEW OF THE AGENCY'S ROLE IN EMERGENCY MANAGEMENT PLANNING AND PREPAREDNESS ACTIVITIES FOR HAZARDOUS MATERIALS EMERGENCIES.

FEMA IS ALSO ACTIVELY SUPPORTING EPA EFFORTS. IN LAUNCHING ITS VOLUNTARY CHEMICAL EMERGENCY PREPARDNESS PROGRAM (CEPP) IN JUNE 1985, EPA REQUESTED

FEMA ASSISTANCE IN PROGRAM IMPLEMENTATION IN RECOGNITION OF FEMA EXPERTISE IN EMERGENCY PREPAREDNESS AND FEMA'S CLOSE ASSOCIATION WITH STATE AND LOCAL EMERGENCY MANAGEMENT OFFICIALS. WITH PASSAGE OF SARA IN OCTOBER 1986, FEMA IS CONTINUING TO WORK CLOSELY WITH EPA IN IMPLEMENTING THE EMERGENCY PLANNING PORTIONS OF TITLE III.

SECTION 305(b) OF TITLE III REQUIRES EPA TO REVIEW EMERGENCY SYSTEMS FOR MONITORING, DETECTING, AND PREVENTING RELEASES OF EXTREMELY HAZARDOUS SUBSTANCES AS WELL AS PUBLIC WARNING SYSTEMS RELATED TO SUCH RELEASES. EPA ASKED FEMA TO COORDINATE THAT PORTION OF THE REVIEW RELATED TO PUBLIC WARNING SYSTEMS. A SURVEY OF LOCAL EMERGENCY MANAGERS ON THE EFFECTIVENESS OF EXISTING WARNING SYSTEMS, THEIR TYPE AND PHYSICAL CHARACTERISTICS, POPULATION COVERED, AND RESPONSE TIME HAS RESULTED IN SOME EXTREMELY VALUABLE INFORMATION ON CHEMICAL ACCIDENTS AND THE UNIQUE PROBLEMS THEY POSE WITH RESPECT TO PROTECTIVE ACTION DECISIONS.

FEMA AND EPA HAVE ESTABLISHED A "STEERING COMMITTEE" FOR COORDINATING HAZMAT PROGRAM ACTIVITIES, EXCHANGING INFORMATION, IDENTIFYING PROBLEMS, AND SEEKING SOLUTIONS. THE STEERING COMMITTEE, CONSISTING OF SENIOR PROGRAM OFFICIALS FROM EACH AGENCY, MEETS EVERY 4-6 WEEKS. ADDITIONALLY, FEMA AND EPA HEADQUARTERS STAFF HOLD JOINT BIWEEKLY CONFERENCE CALLS WITH THEIR REGIONAL OFFICE COUNTERPARTS AS A MEANS FOR STAYING ABREAST OF TITLE III IMPLEMENTATION ISSUES.

FEMA HAZMAT TRAINING INITIATIVES

FEMA TRAINING ACTIVITIES ARE MANAGED BY THE OFFICE OF TRAINING THROUGH THE

EMERGENCY MANAGEMENT INSTITUTE (EMI) AND NATIONAL FIRE ACADEMY (NFA) LOCATED AT THE NATIONAL EMERGENCY TRAINING CENTER (NETC) IN EMMITSBURG, MD. FEMA-SPONSORED HAZMAT TRAINING COURSES INCLUDE HAZARDOUS MATERIALS CONTINGENCY PLANNING TRAIN-THE-TRAINER COURSE (DEVELOPED JOINTLY WITH EPA AND DOT); ANALYSIS OF HAZARDOUS MATERIALS EMERGENCIES FOR EMERGENCY PROGRAM MANAGERS; INTEGRATED EMERGENCY MANAGEMENT COURSE/HAZMAT; CHEMISTRY OF HAZARDOUS MATERIALS; HAZMAT INCIDENT ANALYSIS; HAZMAT TACTICAL CONSIDERATIONS; RECOGNIZING AND IDENTIFYING HAZARDOUS MATERIALS; AND THE PESTICIDE CHALLENGE. SOME OF THESE OFFERINGS ARE RESIDENT COURSES; OTHERS ARE FIELD COURSES.

SECTION 305(a) OF SARA TITLE III AUTHORIZES FEMA TO PROVIDE $5 MILLION A YEAR FOR 4 YEARS TO SUPPORT STATE AND LOCAL GOVERNMENT AND UNIVERSITY-SPONSORED HAZARDOUS MATERIALS TRAINING. THESE TRAINING FUNDS ARE INTENDED TO EXPAND TRAINING OPPORTUNITIES FOR FIRST RESPONDERS, EMERGENCY MANAGERS, AND OTHERS EXPECTED TO DEAL WITH HAZARDOUS MATERIALS INCIDENTS. FUNDS ARE PROVIDED TO THE STATES UNDER FEMA'S COMPREHENSIVE COOPERATIVE AGREEMENT (CCA). THE CCA IS AN AGREEMENT BETWEEN FEMA AND A STATE IN WHICH FEMA PROVIDES FUNDS AND TECHNICAL ASSISTANCE. A STATE, IN RETURN, MUST ACCOMPLISH MUTUALLY NEGOTIATED AND AGREED-UPON WORK OBJECTIVES.

STATES ARE BEING ENCOURAGED TO USE EXISTING TRAINING DELIVERY SYSTEMS TO ACHIEVE MAXIMUM TRAINING IMPACT AND AVOID DUPLICATION. FEMA IS WORKING CLOSELY WITH EPA, DOT, AND OTHER FEDERAL AGENCIES IN DETERMINING AREAS OF EMPHASIS FOR FUND USE, ELIGIBLE COSTS AND COURSES, AND FUND ALLOCATIONS.

FEMA WILL BE THE LEAD AGENCY, WITH NATIONAL RESPONSE TEAM SUPPORT, FOR

CONDUCTING A NATIONAL HAZARDOUS MATERIALS TRAINING CONFERENCE FOR SOME 100-125 STATE TRAINERS. THE CONFERENCE IS SCHEDULED FOR NOVEMBER 30 - DECEMBER 2, 1988, AT NETC IN EMMITSBURG, MD. THE PURPOSES ARE TO ASSESS HAZMAT TRAINING ACTIVITIES SINCE ENACTMENT OF SARA TITLE III AND TO DEVELOP A STRATEGY FOR FUTURE TRAINING PRIORITIES. PROPOSED AGENDA ITEMS INCLUDE STATE USE OF SECTION 305(a) TRAINING FUNDS, IMPACT OF THE NEW NATIONAL FIRE PROTECTION ASSOCIATION COMPETENCY STANDARD ON FIRST RESPONDER TRAINING, SHARING LESSONS LEARNED, NETWORKING TECHNIQUES, AND NEW TRAINING METHODS AND TECHNOLOGIES.

IN FY 1988, FEMA'S EMERGENCY EDUCATION NETWORK (EENET) WILL PRODUCE SEVERAL TELECONFERENCES ON HAZARDOUS MATERIALS. "HEALTH CONCERNS IN CHEMICAL EMERGENCIES" WILL AIR TODAY. THE TELECONFERENCE WILL SEEK TO IDENTIFY THE SCOPE AND IMPLICATIONS OF CHEMICAL EMERGENCY HEALTH ISSUES, AS WELL AS ILLUSTRATE THE ROLE OF PUBLIC HEALTH DEPARTMENTS, EMERGENCY MEDICAL SYSTEMS, AND HOSPITALS IN CHEMICAL EMERGENCY RESPONSE. ON AUGUST 18, "LEGAL ASPECTS IN EMERGENCY MANAGEMENT" WILL BE BROADCAST. ON OCTOBER 26, A TELECONFERENCE ON "HAZARDOUS MATERIALS PROTECTIVE CLOTHING" WILL EXAMINE PRECAUTIONARY MEASURES CURRENTLY AVAILABLE FOR FIRST RESPONDERS. EENET -- A ONE-WAY VIDEO, TWO-WAY AUDIO SATELLITE-DISTRIBUTED SYSTEM THAT BEAMS LIVE PROGRAMS ACROSS THE COUNTRY -- REACHES AN AUDIENCE OF SOME 50,000 STATE, LOCAL, AND OTHER OFFICIALS.

FEMA IS COLLABORATING WITH THE AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES TO DEVELOP CHEMICAL EMERGENCY GUIDANCE DOCUMENTS DESIGNED FOR USE BY AMBULANCE AND HOSPITAL

EMERGENCY ROOM PERSONNEL, ENABLING THESE INDIVIDUALS TO RESPOND SAFELY TO SITUATIONS REQUIRING THE TRANSPORT OR TREATMENT OF CHEMICALLY CONTAMINATED PATIENTS. ONE DOCUMENT, "CHEMICAL EMERGENCIES: EMERGENCY MEDICAL TRANSPORT GUIDELINES," WILL SPECIFICALLY BE TARGETED FOR USE BY EMERGENCY TRANSPORT/AMBULANCE PERSONNEL. THE OTHER, "CHEMICAL EMERGENCIES: HOSPITAL DEPARTMENT GUIDELINES," WILL BE FOR USE BY HOSPITAL EMERGENCY ROOM PERSONNEL. FEMA IS TAKING THE LEAD IN DELIVERING THE TRAINING AND DISTRIBUTING OUTREACH MATERIALS.

FEMA HAZMAT PLANNING INITIATIVES

AS STATED EARLIER, FEMA ENCOURAGES AN "ALL-HAZARD" APPROACH TO EMERGENCY PLANNING. THIS APPROACH FREES PLANNERS FROM A GREAT DEAL OF REDUNDANCY AND CONFUSION BY AVOIDING THE DEVELOPMENT OF SEPARATE STRUCTURES, RESOURCES, AND PROCEDURES TO DEAL WITH EACH TYPE OF HAZARD. THIS APPROACH ALSO HELPS ENSURE THAT PLANS AND SYSTEMS ARE REASONABLY COMPATIBLE IF A LARGE-SCALE INCIDENT REQUIRES A COORDINATED RESPONSE BY MORE THAN ONE JURISDICTION OR MORE THAN ONE LEVEL OF GOVERNMENT. INTERLOCKING PLANS CAN ASSURE THAT THE CHAIN OF COMMAND IS CLEAR, ROLES AND RESPONSIBILITIES ARE KNOWN, AND COMMUNICATIONS ARE COORDINATED.

REQUIREMENTS FOR RECEIVING FEMA "CIVIL DEFENSE" FUNDS CALL FOR LOCAL GOVERNMENTS TO PREPARE ALL-HAZARD EMERGENCY OPERATIONS PLANS WITH SEPARATE ANNEXES OR APPENDICES TO DEAL WITH THE UNIQUE CHARACTERISTICS OF INDIVIDUAL HAZARDS SUCH AS HAZARDOUS MATERIALS. WHILE SATISFYING THE NATIONAL REQUIREMENT FOR NUCLEAR ATTACK PREPAREDNESS, LOCAL JURISDICTIONS ARE ALLOWED TO UNDERTAKE PLANNING FOR NATURAL AND TECHNOLOGICAL HAZARDS TO THE EXTENT THIS ACTIVITY DOES NOT DETRACT FROM ATTACK-RELATED PLANNING.

WITH RESPECT TO HAZARDOUS MATERIALS PLANNING, FEMA, EPA, AND OTHER MEMBERS OF THE NATIONAL RESPONSE TEAM COMBINED FORCES TO PRODUCE THE "HAZARDOUS MATERIALS EMERGENCY PLANNING GUIDE" (NRT-1), RELEASED IN MARCH 1987. NRT-1 IS BASED ON FEMA'S VERY POPULAR "PLANNING GUIDE AND CHECKLIST FOR HAZARDOUS MATERIALS CONTINGENCY PLANS" (FEMA-10), PUBLISHED IN 1980, AND EPA'S INTERIM GUIDANCE FOR ITS CHEMICAL EMERGENCY PREPAREDNESS PROGRAM, PUBLISHED IN NOVEMBER 1985. NRT-1 MEETS THE REQUIREMENTS IN SARA TITLE III MANDATING THAT THE NRT "PUBLISH GUIDANCE DOCUMENTS FOR PREPARATION AND IMPLEMENTATION OF EMERGENCY PLANS."

FEMA, AS CHAIR OF THE NRT PREPAREDNESS COMMITTEE, HAS TAKEN THE LEAD IN DEVELOPING CRITERIA FOR PLAN REVIEW. THESE CRITERIA CAN BE USED BY REGIONAL RESPONSE TEAMS IF THEY ARE REQUESTED TO REVIEW PLANS PREPARED BY LOCAL EMERGENCY PLANNING COMMITTEES UNDER TITLE III. THE CRITERIA ARE PUBLISHED AS NRT-1A, SUPPLEMENT NRT-1.

FEMA AND DOT HAVE PROVIDED SUPPORT TO EPA IN PREPARATION OF "TECHNICAL GUIDANCE FOR HAZARDS ANALYSIS -- EMERGENCY PLANNING FOR EXTREMELY HAZARDOUS SUBSTANCES" ISSUED IN DECEMBER 1987. THAT GUIDE PRINCIPALLY COVERS THE 366 "EXTREMELY HAZARDOUS SUBSTANCES" LISTED IN SARA TITLE III. THE TECHNICAL GUIDANCE IS BEING EXPANDED TO COVER OTHER HAZARDOUS MATERIALS TAKING INTO ACCOUNT TOXICITY, REACTIVITY, VOLATILITY, DISPERSABILITY, COMBUSTABILITY, AND FLAMMABILITY. THE EXPANDED DOCUMENT SHOULD BE AVAILABLE LATER IN THE YEAR.

THE FEDERAL RADIOLOGICAL EMERGENCY PREPAREDNESS COORDINATING COMMITTEE, CHAIRED BY FEMA, HAS CHARGED THE TRANSPORTATION ACCIDENT SUBCOMMITTEE, WHICH IS CO-CHAIRED BY FEMA AND DOT, WITH MAKING REVISIONS TO THE "GUIDANCE FOR DEVELOPING STATE AND LOCAL RADIOLOGICAL EMERGENCY RESPONSE PLANS AND PREPAREDNESS FOR TRANSPORTATION ACCIDENTS" (FEMA-REP-5). THE LATEST DRAFT OF THE GUIDE IS DATED MARCH 11, 1988, AND FINAL PUBLICATION IS SCHEDULED FOR SUMMER 1988.

FINALLY, IN THE AREA OF PLANNING, FEMA IS FUNDING A CONTRACT TO DETERMINE THE UNIQUE EMERGENCY PREPAREDNESS REQUIREMENTS FOR RAILROAD YARDS AND ADJACENT COMMUNITIES IN DEALING WITH HAZARDOUS MATERIALS INCIDENTS. A GUIDANCE DOCUMENT IS SCHEDULED FOR COMPLETION THE SUMMER OF 1988.

FEMA WILL CONTINUE TO WORK WITH DOT, EPA, OTHER MEMBERS OF THE NRT IN ADDITION TO THE PRIVATE SECTOR IN COORDINATING EMERGENCY PREPAREDNESS AND RESPONSE ACTIVITIES TO AVOID DUPLICATION AND MAXIMIZE EFFECTIVENESS OF LIMITED RESOURCES.

THIS CONCLUDES MY REMARKS, MR. CHAIRMAN. I WILL BE GLAD TO RESPOND TO ANY QUESTIONS.

PREPARED TESTIMONY
SUBMITTED BY THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION
HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

CONCERNING
THE HIGH-LEVEL WASTE ASPECT OF HAZARDOUS
MATERIALS TRANSPORTATION

PRESENTED BY
HUGH L. THOMPSON, JR., DIRECTOR
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

SUBMITTED MAY 25, 1988

Mr. Chairman and Members of the Subcommittee: I am pleased to have the opportunity to appear to testify on the very important and timely issue of the transportation of high-level waste.

My testimony covers three major areas: first, an overview of the role of the Nuclear Regulatory Commission (NRC) and our interactions with the principal federal agencies in radioactive material transport; secondly, the transportation of high level waste under the existing federal regulatory system, and whether additional regulatory requirements are needed for high level waste shipments; and finally provide comments on H.R. 1649, H.R. 3836, and H.R. 4041, all proposed legislation relating to the transportation of radioactive materials.

Roles of Federal Agencies

As you know, the transport of radioactive material is regulated principally by the Department of Transportation (DOT) and the NRC. The Hazardous Materials Transportation Act and other statutes require the DOT to regulate safety in the transportation of all hazardous materials including radioactive materials. This role includes ensuring the safety of certain packages and regulating the conduct of shippers and carriers.

The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, authorize NRC to license and regulate the receipt, possession, use and transfer of "source material," "byproduct material," and "special nuclear material." NRC is, thus, responsible for assuring that standards, rules, and regulations provide adequate protection of the health and safety of the public and maintenance of the national defense and security during the transport of radioactive materials.

With respect to the regulation of the transportation of licensed radioactive material, the statutory jurisdictions of the NRC and the DOT overlap. A Memorandum of Understanding published in the Federal Register on July 2, 1979, was entered into by NRC and DOT to avoid duplication of effort and to clarify agency roles. In general, the DOT is responsible for regulating safety during transport of all radioactive materials and packaging for smaller quantities of radioactive materials. The NRC is responsible for regulating the design, manufacture, and use of packages containing fissile material and larger quantities of radioactive material, which includes high-level waste packages as described in 10 CFR Part 71, "Packaging and Transportation of Radioactive Material." Additionally, 10 CFR Part 73, "Physical Protection of Plants and Materials," includes requirements for the protection of certain radioactive materials during transport against deliberate acts to seize, damage, or sabotage the shipments. Generally, however, the Department of Energy is exempt from NRC regulations.

To aid in state emergency planning, Congress directed the NRC to provide advance notice to the states of scheduled shipments of nuclear waste and spent fuel. Since 1980, NRC licensees who transport large quantities of radioactive waste or spent fuel have been required to notify the governor (or his designee) in each state through which shipment is planned. The required notification must be made at least 7 days prior to departure and includes the planned route and schedules, shipment description, and the carrier's name and address. As a security measure, the NRC restricts disclosure of scheduling information for spent fuel shipments until 10 days after the shipment reaches its destination. The governor's office determines who in each state should have access to the scheduling information.

The NRC role in responding to radioactive material accidents is defined in a General Statement of Policy which was published in the Federal Register on March 29, 1984. NRC's role includes ensuring the awareness of affected parties of the event, and offering and responding to requests for technical assistance by providing information, advice, and evaluations. The Federal Emergency Management Agency (FEMA) is responsible for coordinating federal and state participation in developing emergency response plans. Federal assistance for radiological protection in the event of an accident is available through the Department of Energy's (DOE) Radiological Assistance Teams located at 28 sites throughout the country. NRC maintains a 24 hours per day response center with an Emergency Duty Officer available at each regional office and at headquarters to provide assistance to states and local governments if requested.

High Level Waste Transportation and the Need for Additional Requirements

Moving on to the second topic, the Nuclear Waste Policy Act of 1982 (NWPA), assigns to DOE the responsibility for establishing, operating and maintaining the transportation system necessary for shipping high-level waste to DOE facilities, with the NRC role more specifically addressed in the Nuclear Waste Policy Amendments Act of 1987 (Public Law 100-203). Public Law 100-203 requires DOE to transport spent nuclear fuel and high-level waste to a geologic repository or monitored retrievable storage facility only in packages that have been certified by NRC. This will require DOE to submit NWPA package design applications to NRC for review and approval. In addition, DOE is planning to submit several non-NWPA packages for NRC review, including those to be used for shipments to the Waste Isolation Pilot Plant in New Mexico.

Concerning the possible need for additional transportation requirements, two studies evaluated the adequacy of existing NRC requirements. The first was conducted by the Office of Technology Assessment (OTA), which subsequently published a report entitled "Transportation of Hazardous Materials" in July 1986.

The OTA report focuses on containers for radioactive materials, especially those for spent nuclear fuel. The report notes that issues of concern to Congress in requesting the study included: the adequacy of current container standards and safety analysis methods; the safety of spent fuel transport and the possible consequences of accidents; and the need for improvements in container manufacture, transport, and inspection. The report states, and I quote, "that technical evidence and cask performance in service indicate that NRC performance standards yield spent fuel shipping cask design specifications that provide for a very high level of protection - much greater than that afforded in any other current hazardous materials shipping activity." The OTA report also states that "the probability of an accident severe enough to cause extensive damage to public health and the environment caused by a radiological release from a properly constructed cask is extremely remote."

Since the OTA report was issued, a multi-year research study on the level of safety provided by NRC package standards under severe transportation accident conditions has been completed. This study determined the forces encountered in severe non-nuclear road and rail transportation accidents and analyzed the effects of those forces on a spent fuel package designed to current standards. NRC published this study report entitled "Shipping Container Response to Severe Highway and Railway Accident Conditions" (NUREG/CR-4829) in February 1987. The Commission has prepared a brochure which summarizes the two-volume technical report in layman's terms (NUREG/BR-0111, "Transporting Spent Fuel - Protection Provided Against Severe Highway and Railroad Accidents"). The report concludes that the radiological annual risk to the public health from spent fuel shipment accidents is less than one-third of that previously estimated in NRC's "Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes" (NUREG-0170) published in 1977. The Commission relied on NUREG-0170 in part when we found in 1981 that our transport regulations provide for adequate public safety and that no changes were needed to improve safety.

In summary, we believe all indications support a conclusion that the NRC regulatory program provides a high degree of public protection and that changes are not needed to improve safety. Nevertheless, we will continue a vigorous program of surveillance and assessment to assure that the program continues to provide this degree of safety and explore opportunities to make improvements, especially in evaluating new designs and materials of construction that will be used to ship spent fuel to a monitored retrievable storage facility or a repository.

Comments on Proposed Legislation

Relative to my third topic, proposed legislation, NRC has previously provided comments on H.R. 1649 (as H.R. 4895 in the 99th Congress) and H.R. 3836 to the House Committee on Public Works and Transportation in July 1986 and March 1988, respectively. For brevity, I request that copies of these comments be included in the record of this hearing and I will briefly summarize them for you.

H.R. 1649

The objective of the H.R. 1649 is to establish a requirement that no person may offer any high level radioactive waste for transportation unless licensed by NRC. The bill would establish an administrative process whereby applicants would submit descriptive information about proposed shipments, including emergency response capabilities, for consideration by the Commission. The Commission would then determine whether issuance of a license to offer the waste for transport constitutes "an unreasonable risk to the common defense and security or to the health and safety of the public." Because the Commission has found on a generic basis that spent fuel transport risks to the public health and safety are small (NUREG-0170), it is not clear what purpose the bill would serve by examining each shipment from a risk standpoint. This proposed legislation would not significantly increase safety, but would consume substantial resources at the federal level, and at NRC in particular, and would impose requirements which in many instances duplicate existing safety rules and practices. NRC, therefore, does not support passage of H.R. 1649.

H.R. 3836

Turning now to H.R. 3836, this bill would amend the Hazardous Materials Transportation Act to require: (1) full-scale model testing of casks and containers used to transport radioactive materials and public hearings on the adequacy of cask design; (2) DOT licensing of all persons involved in the transportation of high-level radioactive waste or spent nuclear fuel; and (3) additional restrictions on the transportation of high-level radioactive waste or spent fuel through urban areas.

NRC believes that existing federal regulatory requirements provide adequate assurance that transportation of radioactive waste will be accomplished in a manner consistent with the public health and safety. It is our judgment that these changes would not result in any significant improvement in safety, especially in view of the excellent safety record resulting from present practices related to such shipments.

This bill further provides that no high-level radioactive waste or spent fuel should be transported through an urban area if the affected local government can identify a significantly safer route. NRC believes this approach would disrupt the uniform national transportation system established by the DOT. The DOT has already promulgated regulations concerning the highway routing of radioactive materials.

As with H.R. 1649, NRC believes this legislation would not significantly improve the safety of transportation of high-level radioactive waste or spent fuel, and would impose substantial new resource burdens on the NRC and DOT. Therefore, NRC does not support its enactment.

H.R. 4041

The final piece of legislation, H.R. 4041 would require the DOE to transport spent nuclear fuel and high-level radioactive waste, and any other radioactive waste with concentrations of radionuclides that exceed the limits for Class C established in 10 CFR Part 61.55, only in packages certified by NRC for that purpose. NRC does not certify packages specifically for the purpose of transporting radioactive waste with concentrations of radionuclides that exceed limits for Class C wastes. We certify package designs for shipments in which the quantity, rather than the concentration, of radionuclides exceeds limits established in DOT's and NRC's rules. Our packaging standards for transportation are independent of waste form. This provision is, therefore, at odds with the basic structure of our current transportation regulations which we believe already provide adequate protection of public health and safety and the environment. As such, we do not endorse this provision. As stated earlier, DOE is already required to use NRC-certified packaging for Nuclear Waste Policy Amendment Act shipments. The bill would require DOE to use NRC-certified packaging for other spent fuel and high-level waste shipments as well. We are neutral on this provision of the bill; however, NRC currently has no resources to conduct this activity.

In closing, Mr. Chairman, I would like to express our view that the roles and authorities among the agencies involved in the transportation of radioactive materials are well defined by existing statutes and subsequent agreements, and that the system provides for adequate coordination among the agencies. The safety record for radioactive materials transport is excellent. Independent reviews confirm that our standards provide adequate public safety. NRC does not support the specific legislation we have been asked to consider for this hearing. Nevertheless, the Commission continues to identify areas for further research and evaluation, and is prepared to modify its rules or practices as may be required to maintain the transportation safety record.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

CHAIRMAN

March 14, 1988

The Honorable James J. Howard, Chairman
Committee on Public Works and Transportation
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

This responds to your request of January 4, 1988, for the Nuclear Regulatory Commission's (NRC) views on H.R. 3836 entitled "The Nuclear Waste Transportation Act of 1987." This legislation would amend the Hazardous Materials Transportation Act to require: (1) additional testing of casks and containers used to transport radioactive materials and public hearings on the adequacy of cask design; (2) Department of Transportation (DOT) licensing of all persons involved in the transportation of high-level radioactive waste or spent nuclear fuel; and (3) additional restrictions on the transportation of high-level radioactive waste or spent fuel through urban areas.

The Commission believes that existing Federal regulatory requirements provide adequate assurance that transportation of radioactive waste will be accomplished in a manner consistent with the public health and safety. These requirements have in fact resulted in a radioactive waste transportation system with an excellent safety record, particularly when compared with the transportation of other hazardous materials. Although the proposed procedures would fundamentally alter package design testing and greatly expand radioactive waste shipment requirements, it is our judgment that these changes would not result in any significant improvement in safety.

We also believe that the proposed additional procedures would impose a significant resource burden on Federal regulatory agencies, package designers, and shippers. This would have a significant, adverse impact on NRC in an era of budgetary constraints.

Furthermore, some provisions of this legislation address issues previously ventilated and resolved. For example, this legislation would require the NRC to hold hearings on the adequacy of design standards and tests for packaging. The NRC carefully considered public comments in formulating its requirements. Moreover, in July 1986, the Office of

Technology Assessment conducted an independent study on the transportation of hazardous materials in which they concluded "...that technical evidence and cask performance in service indicate that NRC performance standards yield spent fuel shipping cask design specifications that provide an extremely high level of public protection, much greater than that afforded in any other current hazardous materials shipping activity." Based on the safety record, research, and physical testing, the NRC believes spent fuel transport risk under the existing radioactive material transportation standard is small, that existing requirements are sufficient, and that further hearings are unnecessary. The NRC has expressed these views in previous Congressional testimony. See testimony of Victor Stello, Jr., (May 12, 1987) and Responses to Post-Hearing Questions submitted by the NRC. (July 13, 1987). (Copies enclosed)

Finally, H.R. 3836 provides that no high-level radioactive waste or spent fuel should be transported through an urban area if the affected local government can identify a significantly safer route. This approach would disrupt the uniform national transportation system established by the DOT.

In sum, the Commission believes that existing federal regulations in this area are adequate. This legislation would not significantly improve the safety of transportation of high-level radioactive waste or spent fuel and would impose substantial new resource burdens on the NRC and DOT.

Sincerely,

Lando W Zech J.

Lando W. Zech, Jr.

Enclosures:
As Stated

cc: Rep. John Paul Hammerschmidt

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

87 - 726 -1

July 9, 1986

The Honorable James J. Howard, Chairman
Committee on Public Works and
Transportation
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

By letter of June 5, 1986, you requested the Commission's comments on H.R. 4895. The Commission has asked me to respond that the Commission does not support enactment of H.R. 4895.

Initially, the Bill would establish an administrative process which would require the inspection and licensing of each separate shipment of high-level radioactive waste, especially spent fuel. The Commission has already published its generic Final Environmental Statement on the Transportation of Radioactive Materials by Air and Other Modes (NUREG-0170). Based upon information contained in this report and the public comments received, the Commission has found that the risks of transporting radioactive material, including spent fuel, are small. Therefore, the Commission has concluded that current transportation requirements adequately protect public health and safety, and that no changes in these requirements are needed. In view of the fact that the Commission has found that the generic risks of transportation of spent fuel are small, the Commission finds no useful purpose from a risk standpoint in examining each shipment.

Furthermore, the Bill is silent on requirements for packaging to be used in making shipments of high level radioactive wastes. Current requirements, both national and international, place primary reliance on packaging for protecting public health and safety. This omission would create a serious safety concern if this Bill were to replace the existing Federal system for waste transportation regulation.

In sum, the Commission concludes that this legislation would not significantly contribute to public health and safety if enacted. Instead, the legislation would consume substantial resources at the Federal level in general and at the NRC in particular and would impose regulatory requirements which in many cases are either duplicative or contradict or nullify existing safety rules and practices. Therefore, the Commission does not support passage of H.R. 4695. Attached are more detailed staff comments on the Bill.

Respectfully,

William C Parler

William C. Parler
General Counsel

Attachment as stated

Additional Staff Comments on H.R. 4895

87 - 726 -3

Our more detailed comments are referenced to specific sections in the Bill:

SEC. 2. REQUIREMENTS

The Bill states that "No person may offer any high-level radioactive waste for transportation in interstate commerce unless licensed in accordance with this Act." The term "person" is not defined in the Bill. If "person" is intended to include the Department of Energy, this would be a significant departure from current practice, pursuant to the Atomic Energy Act of 1954, whereby DOE ships most of its waste under its own authority. Furthermore, it is not clear whether the issuance of licenses by the NRC would be an exercise of its authority under the Atomic Energy Act and subject to the specific provisions of that law relating to administrative procedures and judicial review.

SEC. 3. LICENSING AUTHORITY AND APPLICATION REQUIREMENTS

The Bill would require applicants to send the Commission information on the need for the shipments, routing arrangements, alternate routes, population density, and emergency response plans and data. The Bill does not, however, specify how the Commission should use this information, or what the applicable acceptance criteria are.

Many of the descriptions that would be required on the license application are already included on the shipping papers that Department of Transportation (DOT) regulations require accompany the shipment. It is not clear who the "chief official" is of each political subdivision of a state or Indian reservation. It is not clear what use the Commission would have for the names and locations of medical personnel within political subdivisions along the route. DOT regulations already require carrier insurance.

SEC. 5. NOTIFICATION TO POLITICAL SUBDIVISIONS AND INDIAN TRIBES WITH RESPECT TO APPLICATION

The requirement for the Commission to notify in writing the "chief official" of any political subdivision along the route would be costly to implement administratively, and would constitute a significant departure from the Commission's current prenotification requirements.

SEC. 6. ORDER WITH RESPECT TO ROUTING OF HIGH-LEVEL RADIOACTIVE WASTE

The Commission and DOT share responsibility for regulating safety in the transport of radioactive materials. The respective roles of each agency are defined in a Memorandum of Understanding under which DOT is responsible for safety of routes. DOT has issued regulations for the transport of highway route controlled quantities of radioactive materials. DOT has also issued guidelines for states to use in designating preferred routes for controlled quantity transport. The Bill could be interpreted as giving the Commission the authority to supersede DOT's highway routing rules. The Commission has supported DOT's routing rules and has no basis for charging them.

SEC. 7. NOTIFICATION TO POLITICAL SUBDIVISIONS AND INDIAN TRIBES WITH RESPECT TO ORDER

As with Section 5, the notification requirements pose a new administrative burden. NRC's General Statement of Policy on response to accidents occurring during transportation of radioactive material (49 FR 12335) recognizes that "states have the primary responsibility for protecting the health and safety of the citizens from public hazards."

SEC. 11. DEFINITIONS

The term "high-level radioactive waste" has been defined differently in several statutes. This has resulted in some confusion, which would be compounded if the language of the Bill were adopted in its present form. It would be preferable for the legislation to define high-level radioactive waste to mean "high-level radioactive waste and spent nuclear fuel as defined in the Nuclear Waste Policy Act of 1982."

Mr. ANDERSON. As I announced earlier, following this panel we were going to break for 30 minutes for lunch, because we have several panels following this, so at this time we will recess for roughly 30 minutes, which means about 2:20 we will bring down the gavel.

Again, thank you very much for your presentation, all of you.

[Whereupon, at 1:50 p.m., the subcommittee recessed, to reconvene at 2:20 p.m., the same day.]

AFTERNOON SESSION

Mr. ANDERSON. The meeting of the subcommittee will come to order.

Our next witnesses are a panel of four: The Honorable Vivian E. Watts, Secretary, Transportation and Public Safety, the Commonwealth of Virginia, representing the National Governors Association, accompanied by Raymond C. Scheppach, the executive director of the National Governors Association; the Honorable Verna Clayton, village president of Buffalo Grove, IL, vice-chairperson of the Transportation and Communications Committee, National League of Cities; and Jeffrey Schiff, Executive Director of the National Association of Towns and Townships.

We have all of your prepared statements. They will be made a matter of the record in their entirety. I will let you decide who goes first.

TESTIMONY OF HON. VIVIAN E. WATTS, SECRETARY, TRANSPORTATION AND PUBLIC SAFETY, COMMONWEALTH OF VIRGINIA, REPRESENTING THE NATIONAL GOVERNORS' ASSOCIATION; RAYMOND C. SCHEPPACH, EXECUTIVE DIRECTOR, NATIONAL GOVERNORS' ASSOCIATION; HON. VERNA L. CLAYTON, VILLAGE PRESIDENT, BUFFALO, IL, REPRESENTING THE NATIONAL LEAGUE OF CITIES; AND JEFFREY H. SCHIFF, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF TOWNS AND TOWNSHIPS

Ms. WATTS. Thank you very much, Mr. Chairman. I think that I will read most of my statement for the record, although I do appreciate the length of time that you have already spent on this issue, not only today but the previous public hearing.

I am aware that you have at least 11 different bills pending before you on the subject of hazardous materials transportation. However, rather than address specific bills or review the litany of congressional issues, I would like to touch upon those issues which, at least from Virginia's perspective, are most important.

To set the context of Virginia as representative of 1 of 50 States, 60 percent of the Nation's population is within a day's drive of Virginia, and many of them do drive to and through Virginia. Six major interstates totaling 1,090 miles traverse the State, and our designated major arterial network includes an additional 1,800 miles. Finally, any Government program in Virginia must meet very diverse conditions from the Atlantic coast to the mountain terrain lying, in fact, west of Detroit.

One final perspective for my testimony: My Secretariat of Transportation and Public Safety entails policy oversight of 14 agencies, including State police—or highway patrol, as they are so often referred to in other States—emergency services, fire programs, as well as the Department of Motor Vehicles and the third largest State Department of Transportation in the United States.

In April 1986 I appointed a task force to examine the hazardous materials situation, our emergency response capabilities, our hazardous materials training program, and methods to provide adequate hazardous material emergency response across our diverse State. In the final report which was submitted to me in December 1986, the task force arrived at the following conclusions:

Virginia has a real challenge to meet in the area of hazardous materials incident response. In 1985 there were over 330 million truck miles carrying hazardous materials on Virginia's 10 major highways. Some 179 million of these miles were in the Commonwealth's high population centers. Ten of Virginia's metropolitan centers also contain major rail yards, thereby compounding the potential for transportation-related incidents.

While this is challenge enough, it does not address the potential for problems of fixed facilities. There are 3,148 industrial facilities which report under the State toxic law.

I will address the remaining points under the conclusions as part of the implementation, since all of them were picked up in our implementation.

Now to implement our program, the task force made specific recommendations. These recommendations were presented to Virginia's General Assembly at its 1987 session as the Virginia Hazardous Material Emergency Response Program. I am pleased to tell you that the program was adopted and funded in the amount of $1.2 million in the first year.

The major provisions of the program are, first, the Virginia Department of Emergency Services was designated to coordinate the State hazardous material program and is responsible for program management, including establishment of the regional teams, development of local and regional plans and programs, coordination of training activities, and coordination of response activities.

Second, a statewide network of regional hazardous material emergency response teams is being established and seven regional areas are in the process of being formed.

Third, existing hazardous material emergency response teams are being used, where possible, as the basis for regional response teams. We are building on the local capability that exists. Equipment and training for the teams is funding on a State-local cost share basis. The percentage of cost sharing is negotiated, based on several factors, including ability to pay.

Fourth, the State network of regional hazardous material emergency response teams is being implemented in phases over a 3-year period.

Fifth, a State Hazardous Materials Emergency Response Advisory Council was established to provide advice and assistance on all aspects of the program to the State Coordinator of Emergency Services, as the coordinating official for the development and implementation of the program. The advisory council is also required to coordinate with and give advice to the Virginia Emergency Response Council, which is responsible for implementation of Title 3 of the Superfund Amendments and Reauthorization Act.

Sixth, each local jurisdiction is to appoint a hazardous materials coordinator.

Mr. Chairman, as positive as I feel about what I have laid out thus far as to how fast Virginia has moved and the way congressional intent under SARA has been translated to the operational level, from my 25 years of local and State government experience, the most important aspect of Virginia's program is number seven, the fact that the accelerated development and delivery of existing training has had the kind of focus that we have been able to give it. While the legislative proposals before you are important, however many in number they may be, it will matter little if a computer data bank can be accessed, if carriers take one route or another, or even if placarding is improved, if the persons at the scene have not received training.

The Virginia program has established awareness and personal protection training, level one, for all first responders. The first State fire chiefs' meeting I attended introduced me to an old film now, documenting the tragic scars, immediate loss of life, and eventual suicide resulting from people first on the scene simply throwing water on a fire of unknown origin. Life and property protection training, level two, for selected members of fire departments and rescue squads, can prevent incidents such as the above or extensive and perhaps irreparable environmental damage, through training for initial analysis and containment.

Control and abatement training, which is level three, for members of technical regional response teams, demands over 200 hours of training to produce the level of confidence needed. Finally, operational command and management training, level four, for command and control personnel, I believe is essential to assure the public's safety.

The magnitude of Virginia's training challenge is probably not unlike other States. There are some 53,000 individuals in the Commonwealth of Virginia who should receive hazardous material training. Even though Virginia is 71 percent urban by census definition, about 75 percent of all fire personnel and about 70 percent of emergency medical personnel are volunteers. This fact alone complicates the training task, because those dedicated volunteers can only contribute a limited amount of their time. Notwithstanding, we have been successful in training approximately 7,000 firemen, policemen, and rescue personnel in various aspects of hazardous material response since we initiated the program.

Making students available for training, however, is often difficult. There are mandatory retraining requirements that compete for the student's training time. In addition, when the student is attending training, particularly some of the longer courses which must be taught in 40-hour blocks, the paid student's regular duties must be performed by other personnel, or the volunteer student has conflicts with his normal work.

In conclusion, I have given this description of one State's experience in dealing with hazardous materials emergencies to demonstrate that the States can respond effectively. I also believe that we can coordinate and work with the Federal Government in meeting the hazardous materials challenge, but the organizational details I have provided are merely the skeleton. Training provides the sinew to do the job. Training provides the heart to exercise courage on the scene judiciously, and training provides the intelligence to make the right choice. Finally, not in poetic terms but in more blunt terms, training helps establish trust at the working level, overriding turf protection with the wisdom of coordination.

Thank you.

Mr. **Anderson**. Thank you, Vivian. We will hold our questions until we complete the panel.

Mr. **Anderson**. Our next witness the Honorable Verna Clayton.

Ms. **Clayton**. Thank you, Mr. Chairman. As you have indicated, I am Verna L. Clayton. I am village president of Buffalo Grove, IL, and vice-chair of the National League of Cities' Transportation and Communications Committee. I am here today to testify on the transportation of hazardous materials for the National League of Cities and the 16,000 cities and towns in every part of the Nation that NLC represents.

In the brief time that I have, I will highlight the viewpoint of our organization regarding hazardous materials transportation as presented in our written testimony. We believe the Hazardous Materials Transportation Act has never been implemented in the manner envisioned by this committee. It has been plagued by insufficient personnel and inadequate resources. While the law assumes the Department of Transportation will develop the rules, enforce them, and coordinate emergency response, that simply has not been done and is unlikely to be done, given the current resources.

Consequently, regulation of hazardous materials transportation has, by default, become the responsibility of State and local governments. The result is confusion, conflict, and endless litigation.

Overall, we are pleased with the recent OTA report on the transportation of hazardous materials, and believe their recommendations are largely consistent with NLC's policies on this issue. Our priorities are very simple: emergency response capacity, adequate enforcement, and a funding source. Along with addressing these needs, we also believe that it is essential for Congress to clarify the legitimate roles and responsibilities for each level of government with respect to transportation of hazardous materials.

Regarding emergency response, first and most importantly, a Federal program should be created to provide assistance to localities for training, planning, and equipment purchases, in order to improve emergency response capacity.

Second, Federal, State, and local governments should develop one centralized emergency response authority within each of their jurisdictions, to enable better interjurisdictional communications when an accident does occur.

Third, the Federal Government should develop an outreach program to explain its regulations to State and local officials, and should set minimum training and education standards so that shippers and emergency personnel in all jurisdictions will have common understanding of accident prevention and mitigation.

Fourth, the Federal Government should provide guidelines for planning for and responding to emergencies, and should furnish technical information in an emergency situation.

Fifth, the Federal Government should evaluate and certify training programs used by regional, State, and local emergency personnel.

Finally, industry should be required to participate in education and training efforts, and in accident prevention and response activities.

In the area of enforcement, the Federal Government should continue to be responsible for the enforcement of manufacturing, testing, repair, and reconditioning standards for hazardous materials containers and packaging, and these standards should apply to all shipments made by the Departments of Energy and Defense, as well.

Additionally, the Federal Government should continue to enforce standards for labeling, marking, placarding, designating and classifying hazardous materials. I also wish to reiterate the need for regulatory consistency.

State and local governments should have concurrent jurisdiction over routing. That is, they should be permitted to adopt and enforce routing requirements, including time-of-day restrictions, escorting, and local bans which are consistent with Federal performance standards, unless the State or locality can demonstrate that it has a unique local safety or health circumstance which necessitates passage of a routing requirement inconsistent with the Federal standard.

Disputes about the consistency of routing requirements with Federal law should be considered by the Department of Transportation, which should evaluate inconsistency petitions according to specific criteria such as the impact of the requirement on interstate commerce and safety. There should be time limits on the evaluation to expedite decisionmaking. In a court review, the Secretary of Transportation's decision should be advisory, not binding upon the court.

NLC believes Congress should establish a national trust fund based on a registration fee which will generate sufficient revenues to pay for State and local hazardous materials-related needs, such as emergency response planning, training, equipment, and personnel. Funds should be distributed to State and local governments based on a formula which takes into account the volume of hazardous materials shipments passing through each jurisdiction annually, and in proportion to the amount of risk that is caused by such shipments.

One other issue I would like to raise, Mr. Chairman, is that NLC has been advocating improvements for over 7 years. We undertook these efforts as a commitment to former DOT Secretary Drew Lewis, to reach agreement on a deficit neutral proposal with both State and local government and private sector support. We delivered, but unfortunately neither the Department nor Congress have followed up. Every 2 years, Congress reauthorizes the bill. This time we recommend you reauthorize HMTA through 1989 so that you can spend time next year revising and improving the law, outside the context of an election year.

On behalf of the League of Cities, we appreciate the opportunity to testify before this subcommittee and share our views with you on this critical municipal issue. I would be pleased to answer any questions that you might have. Mr. Chairman, I would also like to submit for the record NLC's position on this subject.

Mr. ANDERSON. Without objection, so ordered, and we will hold the questions until we get through all the panel, Verna.

Next, Raymond Scheppach of the National Governors' Association.

Mr. SCHEPPACH. Thank you, Mr. Chairman. I appreciate your invitation to appear before you today to discuss State concerns relating to hazardous material transportation. I would like to submit my full statement for the record but to summarize about six key points for you very quickly.

The first is that the Governors believe that coordination of effort is key. There is always a tendency, I think, when there are problems, for the Federal Government to preempt other levels of government, and I would caution you that ofttimes what we need is better coordination, not preemption.

Second, with respect to funding needs I would encourage you to look at user financing, such as previously indicated, for example, special user fees for a trust fund to be allocated back for training and other uses. The States do now impose various fees for this purpose and also spend some money out of general funds. If you move in this direction, however, we do not want to be preempted in collection of our own fees.

Third, additional education and training are needed across the board, from responders to accidents to inspectors to drivers and so on. This is probably the States' highest priority. Many States have already developed programs and are expanding them, but additional assistance is needed.

Fourth, with respect to emergency response, the Governors believe that States must assume the lead role in developing effective State and local government response plans and capabilities. The Federal program should assist State programs but should not duplicate them.

Fifth, on enforcement, strengthened support for ensuring compliance with regulations is essential. NGA has called for full State participation and full funding of the Motor Carrier Safety Assistance Program, which has substantially upgraded the number and quality of inspectors.

Sixth, on the data collection issue, a critical ingredient for the success of the commercial driver license program will be the management information system that is currently under development. We hope that this can be accelerated. A similar need exists for the integrated information on vehicle defects and other safety deficiencies—the so-called Safetynet Program—which we hope will move forward on this also.

With that, Mr. Chairman, I will be happy to answer any questions.

Mr. ANDERSON. Thank you, Ray. We will hold the questions until we get all of your statements.

Our final witness on this panel is Jeffrey H. Schiff, executive director of the National Association of Towns and Townships.

Mr. SCHIFF. Thank you, Mr. Chairman. I am here today testifying on behalf of the 13,000 members of the National Association of

Towns and Townships. These are mostly small, mostly rural communities across the country.

To set the context for my testimony, I would like to discuss just briefly what it means to be a small community in the United States today. In 1988 there are 39,000 units of general purpose government in America. That is all the counties, all the townships, and all the municipalities—39,000. Eighty-six percent of them have populations under 10,000 people. Almost three in four have populations below 3,000 people, and today, even today, more than one-half of all the communities that exist in the United States have fewer than 1,000 persons.

That brings with it quite a bit of baggage, if you will, when we talk about the imposition of Federal policy or mandates or programs. It means that we are talking about communities run by volunteers, and many of the facilities that we assume a local government would have when we live in a metropolitan area such as Washington, do not exist. There are not staff people, generally. There are not computers. There are not monies available to travel long distances to take advantage of training opportunities, which invariably are offered far away from many of our isolated rural areas.

So that is the context in which the National Association of Towns and Townships presents its testimony today. What we find in the United States today is a transportation system that has evolved in such a way that hazardous materials transportation is moving away from, in general, our larger communities, because of the concentrations of population there; many of these shipments are running into areas which are the least prepared to deal with them. So what we have is a very unusual situation, in that there is a great possibility that accidents will most likely happen in those areas which are least prepared to deal with them.

Therefore, what we are calling for is Federal policy which recognizes the special and specific needs of smaller communities, if they are to act as first responders. These small communities are invariably served by volunteer fire companies which exhibit the same sort of lack of resources as do the local governments that they serve. In that context we have, as an association, six recommendations which we believe will implement very well the recommendations of the Office of Technology Assessment's 1986 study on hazardous materials, in which we participated with two representatives on the group.

We do believe that a key to the answer to the situation for smaller communities is a program of registration of shippers and carriers, as was brought out by several of my colleagues. The Department of Transportation, as we understand it, does already have the authority to register these shippers and carriers but has not done so. We believe that the registration process, in addition to giving us a better idea of the universe of actors in this area, would serve as the way to raise money to establish an emergency response fund specifically for the training and planning and equipment needs of these communities that otherwise are being asked to carry out Federal policy without the resources to do so.

Another recommendation is the adoption, in a modified fashion, of a uniform set of national standards with regard to hazardous materials transportation. We recognize the situation that could ultimately confront shippers and carriers in the area of hazardous materials, if they were looking at a patchwork quilt of varying amounts of regulation of different types as they moved across a State or region. Our membership is aware of that potential situation, is willing to give up some of its local authority in order to deal with that aspect of the problem, but not completely. We believe that there are certain areas, in terms of mutual routing decisions and curfews and such other areas, where local governments should have an active role.

We believe that the area of training programs is one that should be looked at by the Congress. If we look at a small community as having very few, very precious resources to spend to come up to training levels for hazardous materials response, we need to have a system whereby those training programs are certified, so that these communities which are willing to submit to this kind of training will not be wasting their resources by using these scarce resources in an area that might not fulfill the training requirements that they need.

We believe that there needs to be a better information flow to localities on hazardous materials in general, and this would be very helpful in implementing the provisions of Title III of the Superfund amendments. We also think that another type of data collection that is very much needed at the present time is better information, better data on the capacities of local agencies to actually serve as first responders, so we will know where those holes are. Perhaps the planning mechanism set up by Title III would be a good way to gather that kind of information as a part of their work.

In summary, let me just reiterate that it is our position that smaller communities, the majority of all local governments in the country, the majority of the local governments that are being asked to be first responders in the case of hazardous materials accidents, are different and have different needs than larger communities do. We believe that Federal policy must, above all things, be flexible, in order to be realistic. If our communities are to be asked to perform as an implementor or as an executor of Federal policy, then the regulations, the programs, the requirements must be such that they can actually be carried out.

If flexibility is not able to be reached, then there must be resources provided in order to allow these communities to reach the level of expertise that is required of them. To require localities to implement Federal policy without flexibility and without resources is, with all due respect, tantamount to doing nothing, because the system will close down.

Our statement does address several of the pending bills now before this committee and the Congress. We would be very pleased to answer any questions you have about that part of our testimony or any other part of our testimony that we have already submitted. Thank you very much.

Mr. ANDERSON. Well, thank you very much, Jeffrey.

My first question is to The Honorable Vivian Watts: Vivian, your statement emphasized the need for training, particularly at the local level. How much do you believe a program such as the one you have in Virginia would cost nationwide?

Ms. **Watts**. Again, as I asserted in my comments, our start-up costs for the program that I outlined were $1.2 million in the first year. Now in that program I indicated that we have, in that first year, had 7,000 who have gone through the training programs. Now the training programs piggyback onto existing training programs that have been going on as far as our fire services training. Every year we train approximately 20,000 firemen through various courses, so that this kind of network that is making use of your experienced people within the system, giving them the adequate training so that they can then impart that, particularly to the first responders, is the perspective that needs to be kept in mind when you are looking at the vastness of the numbers of the people who need to be aware of the basic approaches and dangers of hazardous material incidents. That is level one training, and that is not as costly as the numbers would indicate.

Then you move into level two, where you are working with more experienced firemen, and you are working with people who would then have the judgment and experience to know how to contain an incident, and of course the 200 hours plus that I was referring to for level three, where you are dealing with people who will be capable of moving in and being able to take the appropriate action with the appropriate equipment. That does get considerably more expensive but, as I have indicated, it is important that you build on whatever existing local efforts are already there, which would predominately be in your metropolitan areas, the suburbs of your metropolitan areas rather than inner core cities that have other types of financial problems to deal with. You also need to build on whatever exists within your industrial community. It is extremely important that they are brought into it. All of those resources, again, can be brought to bear.

Now after I have painted that picture of, "It's not as costly as it might seem at first blush," I would still reiterate the fact that Virginia put $1.2 million into a program in the first year, so that it was most interesting to me as I learned a great deal this morning, as the chairman also indicated that there was a lot to be learned from the morning's testimony, and the $5 million on the national level just simply does not speak to the magnitude of the problem.

Mr. **Anderson**. Yours was $1.2 million for Virginia, so if you multiply it by 40 or 50 States, we are talking about at least $50 million to do what you are doing in Virginia.

Ms. **Watts**. Yes, which is essentially, predominately training and coordination. There is some equipment involved that, as you are considering some of the legislation before you, that would in fact establish a nationwide computer access, for instance. It is one thing to establish the computer availability at the Federal level, but the cost of accessing that on the local level will be very substantial, in addition to the kind of costs that we are bearing for training and coordination.

Mr. **Anderson**. My second question is to Raymond Scheppach and Vivian Watts, because both of you represent the National Governors' Association. My question is, do you have any specific suggestions on what the Federal Government should do with respect to training public sector emergency responders such as firemen and police? In your answer, please tell us how you think the Federal Government should fund such a training program, either one of you.

Ms. **Watts**. Ray will start.

Mr. **Scheppach**. Given the Governors' overall budget position and their concerns about the Federal deficit, I would think they would probably not be supportive of direct expenditures from the Treasury. They would look to things that were more budget-neutral, so I would suspect that they would tend to support some kind of a trust fund activity.

Mr. **Anderson**. How would the money get into the trust fund?

Mr. **Scheppach**. Well, I would think you would do it based on either permits or registration fees from handlers.

Mr. **Anderson**. Sort of like a user tax thing?

Mr. **Scheppach**. That's right. In terms of the actual training, I think that the role of the Federal Government should not be very large, more than providing money back down to State and local officials to do the training themselves.

Mr. **Anderson**. My next question is to Verna Clayton of the National League of Cities. Verna, in your testimony you advocate the need for the creation of a Federal program to provide assistance to localities for training, planning, and equipment purchases, and improved emergency response capacity. Now you suggested that it be funded by a registration fee. My first question on that would be, how much do you think such a program itself would cost?

Ms. **Clayton**. Our committee has not gotten into the specifics of cost on a national level. I have been very interested in hearing what Virginia has done. I will tell you that in my own municipality, which I thought was small until I heard the testimony given to my left today, we are a community of 30,000 people that straddles a county line. We are partly in Cook County, partly in Lake County.

Mr. **Anderson**. And you consider that a village?

Ms. **Clayton**. In Illinois it depends on how you are incorporated.

Mr. **Anderson**. A village can be as big as 30,000 people?

Ms. **Clayton**. Oh, we have villages that are 80,000 people in Illinois.

Mr. **Anderson**. I am confused already. [Laughter.]

Ms. **Clayton**. Anyway, the Lake County portion of our village has become a member of a HAZMAT team that all the fire chiefs in Lake County have joined together to address the problem and to train and so forth, but the Cook County portion has not been able to do that, so we do find it very important that there be some consistency on this training on a larger scale than just on a countywide basis. That particular cost has been—we have provided four men and about $50,000 from our own resources into that particular program.

Mr. **Anderson**. Four men and $50,000, your part?

Ms. **Clayton**. Right.

Mr. **Anderson**. That is for a year, roughly, the $50,000. Who would pay this registration fee that we are talking about?

Ms. **Clayton**. The transporters.

Mr. **Anderson**. The carriers?

Ms. **Clayton**. Right, right.

Mr. **Anderson**. Who would collect the fees and set up the allocations for the States, to give to the States?

Ms. **Clayton**. The Federal Government.

Mr. **Anderson**. The Federal Government?

Ms. **Clayton**. Yes.

Mr. **Anderson**. The Federal Government would collect the fees and set the allocations.

Ms. **Clayton**. And give the money back to the States and localities on a formula basis, depending on need and amount of materials passing through their communities.

Mr. **Anderson**. Now also I notice in your statement you called for a national trust fund to be used for emergency response training. What do you think cities will do if the Federal Government does not address this matter?

Ms. **Clayton**. Well, I believe they will be doing what I had just described that we are doing in our own community, and what Virginia has described, but it won't be consistent, and I think that there is the need. Our committee feels that it is very important that we have the same type of training and program nationwide, because these carriers go through more than just our area, and it should be uniform.

Mr. **Anderson**. What about funding?

Ms. **Clayton**. The funding through the registration fee that we had discussed.

Mr. **Anderson**. My next questions are for Mr. Schiff. Jeffrey, in your testimony you stress the need for establishing a national emergency response fund for training and equipment, to be funded by the assessment of a registration fee for shippers and carriers of hazardous materials which the Department of Transportation has the authority to assess. My question is, Has the National Association of Towns and Townships discussed this with the Department of Transportation, and if so, what has been the Department's response?

Mr. **Schiff**. We, as many of the public interest groups presenting testimony today, have participated in many, many groups and meetings with industry officials and Federal Government officials over many, many years, and the sticking point always has been the establishment of an emergency response fund capitalized by fees on shippers and carriers. I believe that the witnesses who will be testifying on behalf of industry later in your hearing will be able to explain very well what their reservations are to the concept, but that has been the problem area throughout the many, 7 or 8 years that we have been participating in discussions to try to come up with a solution to this problem on a voluntary basis.

Mr. **Anderson**. Now if the Federal Government does not establish such a fund, how do you think the States and localities in your organization will react?

Mr. **Schiff**. I am hesitant to even think about the answer to that question. We are concerned. As the village president to my right explained, her village has spent $50,000 of its own money. That is more than a year's budget for many of my members. It is completely out of the question, and if we accept my premise that many hazardous materials shipments are now moving further and further out from urbanized areas because of regulations and ordinances adopted by our large metropolitan areas, then we are setting ourselves up for a situation that could be a disaster.

Without flexibility, as I point out in my statement, and without the resources, we are simply facing, I fear, a closedown, a shutdown of the system in small and rural communities. They simply will not have the financial capacity to deal with the situation on their own, and therefore we will be confronted at the very best with an inconsistent, patchwork situation, and it is something that I don't think that we want to see.

Mr. **Anderson**. Vivian, did you hear my question to Jeffrey?

Ms. **Watts**. I would be happy to follow up on that question.

Mr. **Anderson**. I wanted to reiterate that in his testimony he stressed the need for establishing a national emergency response fund for training, equipment, and it would be funded and so on. My question to him was, has the National Association of Towns and Townships discussed this with the Department of Transportation, and what has been the response? My question to him, and I am going to ask the same question to you, if the Federal Government does not establish such a fund, how do you think the States and localities will react?

Ms. **Watts**. Mr. Chairman, if I may first in responding follow up on some of the comments that Jeffrey made, I think it is important to sound a realistic note and to emphasize that aspect of Virginia's program, which is the establishment of the seven regional response capabilities. It is unrealistic to think that we will be able to have response in each and every law enforcement, emergency services, or fire programs agency. However, again, at least level one if not level two training is a reasonable and very desirable goal, so that all of these individuals who are literally putting their lives on the line have some idea of the magnitude of what they are dealing with.

So that with that regional response, this would have to be a coordinated effort on the State level that would very appropriately be on a cost-sharing basis, an incentive basis on the part of the Federal Government to have this degree of coordination and regionalization created in each of our 50 States or perhaps in our metropolitan statistical areas which go over State lines. Federal money, judiciously applied, could go a long way toward breaking down the traditional jurisdictional barriers that lead toward, again, the turf protection and improper use of or holes in delivery of services and/or expensive duplication of services, so Federal Government incentives and funding could go a long way.

If the Federal money is not there, there will be a number of States who will continue to have very spotty response capability; a few metropolitan areas, depending quite frankly much more on personality than the degree of problem. There may be an individual who realizes that this is a problem, or because of a particular industrial site location it will be dealt with in that locality and go unaddressed in other localities where the needs might be every bit as great.

Without Federal funding, again judiciously applied, we will not know the magnitude of the problem. We talked with the Department of Transportation, we talked with FEMA, and we said that we would like to go forward with a pilot grant to assess the degree of need that we had. The kind of money that we were talking about was tens of thousands of dollars, not a great deal of money, and there was no response.

That kind of funding would go a long way toward, again, identifying the magnitude of our problem and laying a foundation so that whether or not you had the combination of factors that existed in Virginia, so that a report that I requested in April and was given to me in December was enacted by our State legislature and funded by our State legislature in January and February. Those conditions don't always exist, but Federal funding can help leverage and give the level of information so that individual policymakers have more to go on that what might be newscast hysteria. I don't mean to cast it, but it is the type of thing that incidents unfortunately can raise a great hue and cry but not lead to the kind of meaningful activity that I believe we have made a strong start with in Virginia.

May I also, as I am giving a rather lengthy response, address at this point as well the hope that the Federal Government will be using its funding toward the consistency that was addressed by previous speakers. We chose in establishing our program, which is perhaps one of the reasons why it did pass in a single legislative session, not to mandate the training requirement but to use the existing standards that particularly the fire service people were very comfortable with. We know that the National Fire Protection Association is relooking at those standards.

To the degree that we focus on those standards nationwide and let them develop from the grassroots through the profession, we will outfit the man on the scene, the woman on the scene, much better for the job that they have ahead of them, and they will trust us. One thing that I have discovered in my 2½ years of working with law enforcement people, there is a great deal of trust of each other, and a concern when someone from the outside comes and tells you how to do your job, so that this too is something that the Federal funding can focus upon.

Mr. ANDERSON. Thank you very much.

Mr. APPLEGATE. Before he asks his questions, I just want to say to the witnesses, I hope you have all read his bill, for your own protection. [Laughter.]

Me, too. Thank you very much, Mr. Chairman, and thank you all for being here. It is certainly important to us that we have the input from the various levels of government that you represent, from the National Association of Governors and cities and townships.

It is not easy for any one of you, but particularly I would have great empathy, I think, for the townships and towns. I have a district that is full of them, and I am a very strong supporter of that system. In Ohio we have a very active group of townships and towns and their association, and I know that they lack of monies certainly is prevalent there. They don't have the wherewithal to be able to do what is necessary in order to find save methods for handling hazardous wastes, and in the event of a spill or anything like that.

But I was going to say that I heard Ms. Watts talking about training, and that you figured that the cost, the estimate as far as you are concerned in training, you were talking in terms of about $1.2 million in the first year. Is that it?

Ms. WATTS. For the entire program, which includes the coordination as well as the training.

Mr. APPLEGATE. Yes. That doesn't seem like much money. I don't know what kind of training that they would be getting. What is it that they would do? What would they be trained to do, and who would be trained?

Ms. WATTS. I will give an overview answer, but I do have Addison Slayton here with me, who is the State coordinator, and he would be happy to give you the level of detail that you would want to pursue. Again, we are working with those within the profession. We had seven regional response teams, or seven response teams already established in some of our jurisdictions who were equipped and trained to be able to handle an incident and had had an established response capability for a number of years, so it wasn't just out of the starting gate.

Working with those individuals, you will find that many of those individuals, as I indicated, over 70 percent of our fire people are volunteers. They are dedicated individuals. Over 70 percent of our emergency response people are volunteers. They are dedicated and they will continue to play a strong role in training, both because they have worked with the individuals before, as well as they have a level of trust because they have gone out on the scene and done it, which having someone designated from the top may not have that same level of trust or in fact, again, dedication.

Mr. APPLEGATE. You are talking about how these people would be used as trainers?

Ms. WATTS. Trainers. As you build up that level of expertise, you will also develop an ability to identify trainers.

Mr. APPLEGATE. Yes, yes. Well, let me ask you this because I was going to ask you about what kind of system that they would be trained for. Under that system, would they have equipment to use? In other words, what I am getting at is that—and I would like to ask each of you as to your opinion regarding H.R. 3334, and that is my bill, and I would assume that you have all read that, as per the request of the chairman——[Laughter.]

Has anybody read that bill?

Ms. WATTS. Having great respect for your dedication, I do apologize. Having empathy for your workload, as I described my initial workload of 14 agencies, no, sir, I have not. I'm sorry.

Mr. APPLEGATE. Well, let me see. I think we have 10 bills here.

Ms. WATTS. All right. We have our homework.

Mr. APPLEGATE. Have any of you looked at any of the bills that we have on the agenda here today?

Ms. CLAYTON. I have not. I plead guilty. It was my understanding that we were to come and present testimony on our position as cities and the needs that the cities have with regard to this.

Mr. APPLEGATE. Well, let me ask the township trustees and—

Mr. SCHIFF. I have read most of the bills, but the list continues to grow almost daily so I can't say that I have read them all, but yours I am familiar with.

Mr. APPLEGATE. Well, we will try to stop it, not have any more introduced——

Mr. **Schiff**. That would be great.

Mr. **Applegate** [continuing]. So as to try to make sure that you can consume what we have. Well, you are the only one that has read it. Let me ask you this: I am listening to what you have to say, and the numbers of towns and townships involved. How many towns and townships, again—would you please repeat the numbers?—in the Nation?

Mr. **Schiff**. There are approximately 16,500 townships in the Nation, and in our membership we have about 13,000. We have other, smaller communities that are members as well, but I am speaking only of townships at this point.

Mr. **Applegate**. Just the townships, and what would you estimate the number of small towns?

Mr. **Schiff**. Well, there are approximately 18,000 municipal governments, and overwhelmingly they are very small, as well.

Mr. **Applegate**. Yes, so we are talking about a very, very large number of areas, many of which of course have very hazardous and toxic materials flowing through those communities daily, and most people don't know anything about them. If they did, I suppose they would be very upset to know that those things are flowing through.

My legislation would set up a central computer system, whereby every shipment of hazardous and toxic waste, when it left the plant, the generator, the generator would be charged *x* number of dollars for a manifest which would be assigned to that load, and when it reached its destination it would have concluded, but prior to that—in other words, there could be no early dumping of the materials, which happens a lot of times. Of course, you know as well as I do, and I know in my area that there has been early dumping of some wastes.

But also it includes moneys for equipping and training, extensive training, equipping police cars, equipping fire trucks, whatever local law enforcement there is, so as to allow that these people, either in a preventive situation—which would be primarily the function of the police—or in response to an accident which the firefighters would have to respond to, where they could immediately know what was going on and they could punch it into their computer which would be attached to the vehicle. They would have a response within a matter of minutes, in maybe a minute, because it would go into a central data bank where it would be stored, and they would know then how to respond and what to do. It is a very, very dangerous situation for firefighters, who support this bill, incidentally, and do not support and do not use the CHEMTREC system because of the fact of its inadequacies, those things.

But it is a real time computer and storage system, and also it would make available all of the necessary information for a flow study, which would be very expensive at this point, and it would be made available within 180 days. To me it is a direction that the 1974 law stated that we should go, and since the 1974 law was enacted, it has never been implemented but on a very flimsy basis, in setting up this CHEMTREC system, in which the CHEMTREC organization set up by the chemical manufacturers does a good job up to the point of their ability, but it certainly does not do anything for responding quickly to an accident.

Therefore—and I always come back and talk about difference specifics, for instance in Miamisburg, OH, where it took 10 hours, but we could show you many, many others. Right out here on the beltway it happens frequently, and it may be an hour, it may be 2 hours or 3 or 5 or whatever it might be. In the case of Miamisburg, OH, it was 10 hours, and I think God was on the people's side down there, but anything could have happened. Water could possibly have done it.

But what I wanted to find out was your response to this kind of a direction, and there is no cost to the taxpayers on this. You might say, "Well, somebody has to pay for it because any product has to be passed on, the price of a product passed on to the consumer," but there is no price charge to the taxpayer, and it can generate enough money to take care of up to 500,000 loads a day, but I don't think that we would need 5,000 loads a day, and I am not sure that gasoline would necessarily have to be a part of it, and there is 100,000 shipments a day right there. So that gives you a little bit of a background, and that is a very, very cursory and short one. We have to go vote.

Ms. WATTS. Mr. Congressman, if I may, with that explanation——

Mr. APPLEGATE. Let me say this, if I may. I think I am going to yield to the chairman right now, because I gave you some food to chew on there for a while.

Mr. ANDERSON. Do you want to go now? Do you want to hold them here until we come back?

Mr. APPLEGATE. Well, I think we better go over and vote, because what do we have——

Mr. ANDERSON. And then ask them to stay until you complete your questions?

Mr. APPLEGATE. Yes.

Mr. ANDERSON. Can you stay? We would like to go over. It takes us about 10 or 15 minutes. We will recess for 15 minutes while we go vote.

[Recess taken.]

Mr. ANDERSON. The meeting of the committee will come to order.

Our four witnesses are there in their proper place and Doug Applegate is here in his proper place. Incidentally, I thought you might like to know—I shouldn't say this but, you know, we have been embarrassing you by asking how many of you have read that bill—I got a commitment from him a little while ago. He has promised not to ask how many of the committee have read his bill. [Laughter.]

Only today though. He can do it next time, so I am going to read it tonight myself.

Mr. APPLEGATE. I know you already read it, Mr. Chairman.

Mr. ANDERSON. I know that's what I said.

Ms. WATTS. Mr. Congressman, if I may respond to your question——

Mr. APPLEGATE. Please.

Ms. WATTS [continuing]. Quickly glancing at the bill, if I may respond to the bill in concept, first of all I would respond that whatever clearinghouse, whatever data bank is to exist obviously belongs at the Federal level. However, it is established technically and whoever is in charge of it, obviously it belongs at the Federal level.

If I may then share with you a couple of operational concerns from how the people access that data, I think it tends to just emphasize the need for the kind of pyramiding of coordination that must exist on the local level, so that the guy on the beat in the smallest township, if he is the first one on the scene, he knows who to get on the phone to that has a level of expertise and familiarity with the hazardous material field, that he then can access the national information.

We have, for instance, in our State a 24-hour phone that is part of the Department of Emergency Services, so that if there is a flood in Roanoke or if there is this or if there is that, somebody is on that phone 24 hours a day. That would be part of what we would use to build our network, so that using the seven regions that we were talking about, depending on the hour of the day, you would know to call directly to Richmond or to one of the seven regions.

But in making that call, if you are that person on the scene and you have either no training or level one training—and I will get to that in just a moment, which was also part of your question—you have by making that very call done the same thing as the citizen does when he dials up 911, the emergency number. He has somebody now on the line who can, as well as helping him get more information, can process the response to his inquiry and know the kind of equipment and level of response that that incident may require, and begin that response immediately. So it may take an extra 5 minutes to make that second level of call and access that person, but that person knows the kind of information they are getting and can start the backup immediately.

Mr. APPLEGATE. Yes.

Ms. WATTS. Now if I might reference briefly, along those same lines, the levels of training as we have established them, again I have referenced the fact that we have trained approximately 7,000 individuals since we initiated our program. The bulk of those individuals have received level one training, which is just simply an awareness training, again, an awareness that is simply stated: Your first response should not be to throw water on something if you don't know what it is.

Those individuals have received the training through approximately 250 instructors. Again, many of those instructors were already teaching these individuals other aspects of fire training. We are also making sure that that level of training is part of the updated training required of all of our law enforcement officials. All of our law enforcement officers, on a 2-year basis we have update requirements, and that will be one of the aspects that we will be covering. That level of training takes between 16 and 20 hours, as we have scoped it out, as it is presented.

The level two training is only given to a fireman who has been—I don't know whether it is employed a year—we will say a grade B fireman, an experienced fireman, and that is the individual, then. Again, the training would be about 40 hours in this case, two 20-hour blocks where training is given for assessment and containment, so that they on the scene could make some judgments about what might be done to contain and to assess the level of assistance that may be required.

It is only the level three which requires anywhere between 200 and 240 hours of training, where you are actually training somebody to be able to handle the incident, and those individuals again are fully trained. Still, many of them are volunteers, but with the proper equipment and with being trained in that way, they would be part of our regional response capability and be identified as someone who could be brought into a scene, and whether or not their department has the necessary equipment, they would know where to get the necessary equipment in the closest possible proximity so that they can get to the scene as rapidly as possible.

Then finally our fourth level of training, which again is two 20-hour blocks, 40 hours, is for the management people who on the scene need to be making judgments about evacuation calls and other issues of management. Again, they are aware of some of the options and are totally schooled in the type of coordination and who they should be talking to, and also in that training building up a level of confidence that when they call on somebody, that person is there to help, not to be either—again, we have some turf problems, and I am trying to be helpful as I am being candid this way—making sure that as they receive this training, they are also receiving a higher level of confidence in being able to work with all levels of authority to deal with the situation, and not feel either threatened or that they might lost their own personal control of a situation.

Mr. APPLEGATE. Well, OK. I appreciate that, but basically what it sounded like you were describing is a lot of what CHEMTREC does already. You are talking about a telephone system, which is an inadequate method by which you have to contact somebody then to access the system. What we are talking about is what they call a real time, which is defined as instantaneous, either telephonic or electronic, and that you could access right from the spot.

Ms. WATTS. Yes.

Mr. APPLEGATE. You could access from a fire truck or from a police car, and you can have that information instantaneously, without having to go through anybody else who would have to access into a system.

Ms. WATTS. Again, perhaps that technology is something that will be of reasonable cost, and I obviously will wish you well. I am also, however, indicating that to put the system on line as soon as possible, the real time access point could be at that first call which can be made from existing equipment, coming into the individual who then has immediate access to whatever Federal system is supportive.

That person with that immediate access, by whatever system you establish, is also, however, someone who is highly experienced and knows how to process that information, knows followup questions that might be necessary, knows how to fully utilize all of the resources that might be brought to bear with that to the local scene, and not have that level of decision be left at the first responder's level, who may not have that degree of training and sophistication, and in fact in most cases would not.

Mr. APPLEGATE. No, they wouldn't at the present time but they will under my bill. They will have that degree of training. They will be able to access. They will be able to respond accordingly and, the chances are, save a lot of lives, and it should be done at every level. Particularly when you get down to the township level and the small town level, that is very, very, important because that is where a majority of your waste, your hazardous and toxic waste materials are traveling through, and where you get a lot of your accidents.

Does anybody else——

Mr. SCHEPPACH. May I make a couple of comments, Mr. Applegate?

Mr. APPLEGATE. Sure. Absolutely.

Mr. SHEPPACH. The Governors don't have a position on this bill. But we do have some experience with large national data bases, particularly in the benefit area, in which Congress sanctions States on error rates in food stamps and some of the other programs. Although the technology is often there, one of the things we find is that people do not necessarily input accurately into the systems.

Therefore, you end up with a very, very large, sophisticated system, but because a lot of people aren't inputting correctly, it is not particularly helpful. We have had a lot of experience as I say, in the benefit areas, where they have done it on a pilot program, and basically our recommendation has been not to go forward.

One major recommendation I would make to you, if you want to go forward, is that you pilot test this in a particular area before you ever do it on a whole national scale. As I read your bill, you are talking about charging a fee of about $12. It seems to me your fee does two things: one, it funds this system; and, second, it seems to me 5 percent of that goes back for training.

Mr. APPLEGATE. And equipment.

Mr. SCHEPPACH. And equipment. My own sense is—and I would suspect there would be a consensus at this table—that a 95 to 5 percent split is wrong. I would suggest that for 95 or 90 percent that money should go back for training; And if you could do a data base for 5 or 10 percent, I suspect you might get some support. But I doubt if you are charging a fee to pay for this system as opposed to training—that State and local officials would support it.

Mr. APPLEGATE. Well, I think the 5 percent, just based on the 500,000, you are talking $136 million a year.

Mr. SCHEPPACH. OK, but I think the training needs are probably somewhere between $50 million and $100 million, which is what we are talking about.

Mr. APPLEGATE. Well——

Mr. SHEPPACH. So 5 percent of that is about $7 or $8 million for training. I just think that that is——

Mr. APPLEGATE. Well, we will take the suggestion and think about that. That is always good, to have those kinds of suggestions. Yes, nothing wrong with that.

Ms. Clayton, do you have something?

Ms. CLAYTON. There is not too much more to add, except that it is comforting to know that you are very concerned with these materials that are going through our towns and wanting to do something about it.

What we are concerned about and I don't think the bill covers—and I still haven't read it—as far as certifying the training and also coming up with that standardization that we feel is so important, I don't believe those are addressed. We would like to see that addressed.

Mr. APPLEGATE. Yes.

Mr. SCHIFF. One of the hazards of being at the end of the line is that a lot of the points have already been addressed.

Mr. APPLEGATE. I would suggest yours could be different.

Mr. SCHIFF. Well, it could be. We are very interested in the issues that you raise in your bill. I think in terms of approach, the idea of a pilot program would be good, coupled also with an investigation as to whether the existing systems for providing information could be improved and, if so, compared to the system that you are projecting, is it less costly? Is it as effective for a much-reduced amount of money? That kind of an analysis would probably be very useful and, as the gentlewoman to my right just mentioned, we in our testimony have set out about five or six aspects of emergency response for first responders.

We know that most of our members will not need to be trained at very high levels in emergency response, but will need the basic training in order to manage the situation while more experienced and knowledgeable people are being brought to the scene, and that is a very important responsibility, as well. But in order to do that there are certain other aspects, like the certification of the training programs and the establishment of national standards, that we think would improve the overall feeling of your bill.

Mr. APPLEGATE. Well, I don't think there is any question about the fact that the present system is less costly, but it also is less effective. As a matter of fact, it has very little effectiveness.

Mr. SCHIFF. I think that we don't dispute that. We are not sure, though, whether there is not great chance for the current system to be improved. We think that if smart people looked at it and saw what the deficiencies were—which I think many people would agree there are deficiencies in the current system—that there may be ways to make improvements that might, in the final analysis, provide the same level of service at less cost. That would be information, I think, that policymakers would want to have.

Mr. APPLEGATE. Well, the present system could be improved if we would adopt the provisions of my bill.

Mr. SCHIFF. I understand.

Mr. APPLEGATE. You understand that.

I don't think I have any other questions right now, Mr. Chairman. I think that gives me some good input, and I appreciate your responding to the question.

Mr. ANDERSON. Thank you, Doug, and I want to thank the panel again for staying with us and seeing us through. Thank you very much for your presentation.

[The prepared statements of Ms. Watts, Ms. Clayton, Mr. Scheppach, and Mr. Schiff follow:]

COMMONWEALTH *of* VIRGINIA
Office of the Governor
Richmond 23219

Vivian E. Watts
Secretary of Transportation
and Public Safety

TESTIMONY OF VIVIAN E. WATTS
SECRETARY OF TRANSPORTATION AND PUBLIC SAFETY
FOR THE COMMONWEALTH OF VIRGINIA
TO THE HOUSE PUBLIC WORKS COMMITTEE
SURFACE TRANSPORTATION SUBCOMMITTEE
MAY 25, 1988

INTRODUCTION

GOOD MORNING CHAIRMAN ANDERSON AND MEMBERS OF THE SUBCOMMITTEE.

I UNDERSTAND THAT THIS IS THE SECOND HEARING ON AT LEAST ELEVEN DIFFERENT BILLS PENDING BEFORE CONGRESS ON THE SUBJECT OF HAZARDOUS MATERIALS TRANSPORTATION. YOUR CHALLENGE IS GREAT; THEREFORE, I UNDERSTAND MY TIME MUST BE SHORT.

HOWEVER, RATHER THAN ADDRESS SPECIFIC BILLS OR REVIEW THE LITANY OF CONTROVERSIAL ISSUES BEFORE YOU, I WOULD LIKE TO TOUCH UPON THOSE ISSUES WHICH, AT LEAST FROM VIRGINIA'S PERSPECTIVE, ARE MOST IMPORTANT.

TO SET THE CONTEXT OF VIRGINIA AS REPRESENTATIVE OF THE 50 STATES:

- 60% OF THE NATION'S POPULATION IS WITHIN A DAY'S DRIVE OF VIRGINIA;
- SIX MAJOR INTERSTATES TOTALLING 1,090 MILES TRAVERSE THE STATE AND OUR DESIGNATED MAJOR ARTERIAL NETWORK INCLUDES AN ADDITONAL 1,800 MILES;
- ANY GOVERNMENT PROGRAM MUST MEET DIVERSE CONDITIONS FROM THE ATLANTIC COAST TO MOUNTAIN TERRAIN LYING WEST OF DETROIT.

ONE FINAL PERSPECTIVE FOR MY TESTIMONY: MY SECRETARIAT OF TRANSPORTATION & PUBLIC SAFETY INCLUDES POLICY OVERSIGHT OF 14 AGENCIES, INCLUDING STATE POLICE, EMERGENCY SERVICES, FIRE PROGRAMS, AS WELL AS, THE DEPARTMENT OF MOTOR VEHICLES AND THE THIRD LARGEST STATE DEPARTMENT OF TRANSPORTATION IN THE UNITED STATES.

VIRGINIA'S HAZARDOUS MATERIALS EMERGENCY RESPONSE PROGRAM

IN APRIL 1986, I APPOINTED A TASK FORCE TO EXAMINE THE HAZARDOUS MATERIALS SITUATION, OUR EMERGENCY RESPONSE CAPABILITIES, OUR HAZARDOUS MATERIALS TRAINING PROGRAMS, AND METHODS TO PROVIDE ADEQUATE HAZARDOUS MATERIALS EMERGENCY RESPONSE ACROSS THE STATE.

IN THE FINAL REPORT WHICH WAS SUBMITTED TO ME IN DECEMBER 1986, THE TASK FORCE ARRIVED AT THE FOLLOWING CONCLUSIONS:

1) VIRGINIA HAS A REAL CHALLENGE TO MEET IN THE AREA OF HAZARDOUS MATERIALS INCIDENT RESPONSE. IN 1985, THERE WERE 330,600,300 TRUCK MILES CARRYING HAZARDOUS MATERIALS ON VIRGINIA'S TEN MAJOR HIGHWAYS. SOME 179,398,775 OF THESE MILES WERE IN THE COMMONWEALTH'S HIGH POPULATION CENTERS. TEN OF VIRGINIA'S METROPOLITAN CENTERS, ALSO CONTAIN MAJOR RAIL YARDS, THEREBY COMPOUNDING THE POTENTIAL FOR TRANSPORTATION RELATED INCIDENTS. WHILE THIS IS CHALLENGE ENOUGH, IT DOES NOT ADDRESS THE POTENTIAL FOR PROBLEMS OF FIXED FACILITIES. 3148 INDUSTRIAL FACILITIES REPORT UNDER THE STATE TOXIC LAW.

2) THERE IS A NEED FOR TRAINED HAZARDOUS MATERIALS EMERGENCY RESPONDERS THROUGHOUT THE COMMONWEALTH FOR THE PROTECTION OF PEOPLE AND THE ENVIRONMENT.

3) A GRADED, STANDARDIZED HAZARDOUS MATERIAL EMERGENCY RESPONSE TRAINING PROGRAM IS NEEDED TO SUPPORT A MULTI-LEVEL RESPONSE PROGRAM.

4) THE PROGRAM SHOULD BE COORDINATED AT THE STATE LEVEL, BUT BE BASED ON LOCAL GOVERNMENT RESOURCES.

5) THE STATE SHOULD SUPPORT THE PROGRAM ON A COST-SHARING BASIS WITH LOCAL GOVERNMENTS.

IMPLEMENTATION OF THE HAZARDOUS MATERIALS EMERGENCY RESPONSE PROGRAM

TO IMPLEMENT THE PROGRAM, THE TASK FORCE MADE SPECIFIC RECOMMENDATIONS. THESE RECOMMENDATIONS WERE PRESENTED TO VIRGINIA'S GENERAL ASSEMBLY AT ITS 1987 SESSION, AS THE VIRGINIA HAZARDOUS MATERIAL EMERGENCY RESPONSE PROGRAM. I AM PLEASED TO TELL YOU THAT THE PROGRAM WAS ADOPTED AND FUNDED. THE MAJOR PROVISIONS OF THE PROGRAM ARE:

1) THE VIRGINIA DEPARTMENT OF EMERGENCY SERVICES (DES) WAS DESIGNATED TO COORDINATE THE STATE HAZARDOUS MATERIALS PROGRAM AND IS RESPONSIBLE FOR PROGRAM MANAGEMENT, INCLUDING ESTABLISHMENT OF THE REGIONAL TEAMS, DEVELOPMENT OF LOCAL AND REGIONAL PLANS AND PROGRAMS, COORDINATION OF TRAINING ACTIVITIES, AND COORDINATION OF RESPONSE ACTIVITIES.
2) A STATEWIDE NETWORK OF REGIONAL HAZARDOUS MATERIALS EMERGENCY RESPONSE TEAMS IS TO BE ESTABLISHED, AND SEVEN REGIONAL AREAS FORMED.
3) EXISTING HAZARDOUS MATERIALS EMERGENCY RESPONSE TEAMS ARE BEING USED, WHERE POSSIBLE, AS THE BASIS FOR REGIONAL RESPONSE TEAMS. EQUIPMENT AND TRAINING FOR THE TEAMS ARE FUNDED ON A STATE/LOCAL COST-SHARE BASIS. THE PERCENTAGE OF COST-SHARING IS NEGOTIATED BASED ON SEVERAL FACTORS, INCLUDING ABILITY TO PAY.

4) THE STATE NETWORK OF REGIONAL HAZARDOUS MATERIALS EMERGENCY RESPONSE TEAMS IS BEING IMPLEMENTED IN PHASES OVER A THREE YEAR PERIOD.

5) A STATE HAZARDOUS MATERIALS EMERGENCY RESPONSE ADVISORY COUNCIL WAS ESTABLISHED TO PROVIDE ADVICE AND ASSISTANCE ON ALL ASPECTS OF THE PROGRAM TO THE STATE COORDINATOR OF EMERGENCY SERVICES, AS THE COORDINATING OFFICIAL FOR DEVELOPMENT AND IMPLEMENTATION OF THE PROGRAM. THE ADVISORY COUNCIL IS ALSO REQUIRED TO COORDINATE WITH, AND GIVE ADVICE TO THE VIRGINIA EMERGENCY RESPONSE COUNCIL, WHICH IS RESPONSIBLE FOR IMPLEMENTATION OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT.

6) EACH LOCAL JURISDICTION IS TO APPOINT A HAZARDOUS MATERIALS COORDINATOR.

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, AS POSITIVE AS I FEEL ABOUT WHAT I HAVE LAID OUT THUS FAR AS TO HOW FAST VIRGINIA HAS MOVED AND THE WAY CONGRESSIONAL INTENT UNDER SARA HAS BEEN TRANSLATED TO THE OPERATIONAL LEVEL, FROM MY 25 YEARS OF LOCAL AND STATE GOVERNMENT EXPERIENCE, THE MOST IMPORTANT ASPECT OF VIRGINIA'S PROGRAM IS

7) THE ACCELERATED DEVELOPMENT AND DELIVERY OF THE EXISTING TRAINING PROGRAM.

WHILE THE LEGISLATIVE PROPOSALS BEFORE YOU ARE IMPORTANT, IT WILL MATTER LITTLE IF A COMPUTER DATA BANK CAN BE ACCESSED, IF CARRIERS TAKE ONE ROUTE OR ANOTHER OR EVEN IF PLACARDING IS IMPROVED IF THE PERSONS AT THE SCENE HAVE NOT RECEIVED TRAINING.

THE VIRGINIA PROGRAM HAS ESTABLISHED

- AWARENESS AND PERSONAL PROTECTION TRAINING (LEVEL I) FOR ALL FIRST RESPONDERS. THE FIRST STATE FIRE CHIEFS MEETING I ATTENDED, INTRODUCED ME TO AN OLD FILM DOCUMENTING THE TRAGIC SCARS, IMMEDIATE LOSS OF LIFE AND EVENTUAL SUICIDE RESULTING FROM "SIMPLY" THROWING WATER ON A FIRE OF UNKNOWN ORIGIN.
- LIFE AND PROPERTY PROTECTION TRAINING (LEVEL II) FOR SELECTED MEMBERS OF FIRE DEPARTMENTS AND RESCUE SQUADS CAN PREVENT INCIDENTS SUCH AS THE ABOVE OR EXPENSIVE ENVIRONMENTAL DAMAGE THROUGH TRAINING FOR INITIAL ANALYSIS AND CONTAINMENT.
- CONTROL AND ABATEMENT TRAINING (LEVEL III) FOR MEMBERS OF TECHNICAL REGIONAL RESPONSE TEAMS DEMANDS OVER 200 HOURS OF TRAINING TO PRODUCE THE LEVEL OF COMPETENCE NEEDED.
- OPERATIONAL COMMAND AND MANAGEMENT TRAINING (LEVEL IV) FOR COMMAND AND CONTROL PERSONNEL IS ESSENTIAL TO ASSURE THE PUBLIC'S SAFETY.

THE MAGNITUDE OF VIRGINIA'S TRAINING CHALLENGE IS PROBABLY NOT UNLIKE OTHER STATES'. THERE ARE SOME 53,000 INDIVIDUALS IN THE COMMONWEALTH WHO SHOULD RECEIVE HAZARDOUS MATERIALS TRAINING.

EVEN THOUGH VIRGINIA IS 71% URBAN, ABOUT 75% OF FIRE PERSONNEL AND ABOUT 70% OF EMERGENCY MEDICAL PERSONNEL ARE VOLUNTEERS. THIS FACT ALONE COMPLICATES THE TRAINING TASK, BECAUSE THESE DEDICATED VOLUNTEERS CAN ONLY CONTRIBUTE A LIMITED AMOUNT OF THEIR TIME. NOTWITHSTANDING, WE HAVE BEEN SUCCESSFUL IN TRAINING APPROXIMATELY 7,000 FIREMEN, POLICEMEN AND RESCUE PERSONNEL IN VARIOUS ASPECTS OF HAZARDOUS MATERIAL RESPONSE.

MAKING STUDENTS AVAILABLE FOR TRAINING IS OFTEN DIFFICULT. THERE ARE MANDATORY TRAINING REQUIREMENTS THAT COMPETE FOR THE STUDENT'S TRAINING TIME. IN ADDITION, WHEN THE STUDENT IS ATTENDING TRAINING, PARTICULARLY SOME OF THE LONGER COURSES WHICH MUST BE TAUGHT IN 40-HOUR BLOCKS, THE PAID STUDENT'S REGULAR DUTIES MUST BE PERFORMED BY OTHER PERSONNEL, OR THE VOLUNTEER STUDENT HAS CONFLICTS WITH HIS NORMAL WORK.

IN CONCLUSION, I HAVE GIVEN THIS DESCRIPTION OF ONE STATE'S EXPERIENCE IN DEALING WITH HAZARDOUS MATERIALS EMERGENCIES TO DEMONSTRATE THAT THE STATES CAN RESPOND EFFECTIVELY. I ALSO BELIEVE THAT WE CAN COORDINATE AND WORK WITH THE FEDERAL GOVERNMENT IN MEETING THE HAZARDOUS MATERIALS CHALLENGE. BUT, THE ORGANIZATIONAL DETAILS I HAVE PROVIDED ARE MERELY THE SKELETON. TRAINING PROVIDES THE SINEW TO DO THE JOB; TRAINING PROVIDES THE HEART TO EXERCISE COURAGE JUDICIOUSLY; AND TRAINING PROVIDES THE INTELLIGENCE TO MAKE THE RIGHT CHOICE ON THE SCENE.

FINALLY, IN BLUNT TERMS, TRAINING HELPS ESTABLISH TRUST AT THE WORKING LEVEL, OVER-RIDING TURF PROTECTION WITH THE WISDOM OF COORDINATION.

FINAL REPORT

OF THE

HAZARDOUS MATERIALS

TASK FORCE

COMMONWEALTH
OF
VIRGINIA

FINAL REPORT
OF THE
HAZARDOUS MATERIALS TASK FORCE

SUBMITTED TO
VIVIAN E. WATTS
SECRETARY OF TRANSPORTATION & PUBLIC SAFETY

DECEMBER, 1986

HAZARDOUS MATERIALS TASK FORCE

CO-CHAIRPERSONS

William H. Leighty
Deputy Secretary for Transportation

Barbara M. Wrenn
Deputy Secretary of Natural Resources

STEERING COMMITTEE

William H. Leighty
Deputy Secretary for Transportation

Barbara M. Wrenn
Deputy Secretary of Natural
Resources

Norman S. McTague
Department of Emergency Services

John T. Hanna
Department of Motor Vehicles

Addison E. Slayton, Jr.
Department of Emergency Services

Carl N. Cimino
Department of Fire Programs

Walter L. Smiley
Department of Planning & Budget

EMERGENCY RESPONSE WORK GROUP

Chairman

Norman S. McTague
Department of Emergency Services

Co-Chairman

Bernard J. Caton
State Water Control Board

Beth Turner
E. I. DuPont DeNemours & Co, Inc.

J. W. Burden
State Air Pollution Control Board

Robert Brown
Virginia Emergency Management
Association

G. Lewis Garrett, Jr.
E. I. DuPont DeNemours & Co., Inc.

H. Basil Keys, Jr.
Department of Highways & Transportation

William F. Gilley
Department of Waste Management

Madeline Grulich
Environmental Defense Fund

Chief T. W. Walls
Newport News Fire Department

TRAINING AND PREVENTION WORK GROUP

Chairman

Carl N. Cimino
Department of Fire Programs

Co-Chairman

Susan D. McHenry
Department of Health

Stephen E. Grainer
Department of Emergency Services

James Graham
Fire Chiefs Association

L. T. Rotelli
Police Chiefs Association

James P. McGuire
Virginia Association of
Volunteer Rescue Squads

Bernie E. Chisnolm, Jr.
Department of State Police

Christine Anderson
Police Chiefs Association

Shirley Reynolds
Sheriffs Association

ENFORCEMENT AND REGULATION WORK GROUP

Chairman

John T. Hanna
Department of Motor Vehicles

Co-Chairman

Barbara M. Wrenn
Deputy Secretary of Natural
Resources

W. G. Massengill
Department of State Police

Mason Chalkley
Police Chiefs Association

P. Dale Bennett
Virginia Trucking Association

Raymond J. Gaillard
Allied-Signal Incorporated

Patrick A. O'Hare
Office of the Attorney General

Daniel Harrison
Hampton Roads Maritime Association

Sandra Morse
Department of Waste Management

Stuart Kitchen
Sheriffs Association

William Durham
RF&P Railroad Company

Marshall W. Jones
Hercules, Inc.

David Burk
Virginia Aviation Trade Association

Fred Millar
Environmental Policies Institute

FUNDING WORK GROUP

Chairman	Co-Chairman
Walter L. Smiley Department of Planning & Budget	Michael M. Cline Department of Emergency Services
Robert B. Field Virginia Municipal League	Jill Pope Virginia Association of Counties
W. Thomas Hudson Virginia Manufacturers Association	

EXECUTIVE SUMMARY

INTRODUCTION

In April, 1986, the Secretary of Transportation and Public Safety reconstituted the Hazardous Materials Task Force which had been established in October 1984 and had submitted its report in November 1985. The reconstituted Task Force was charged with examining:

-the problems posed by hazardous materials; their use, storage, and transportation

-current state and local governments capabilities to respond to incidents involving hazardous materials

-hazardous materials emergency response training

-methods of providing adequate capabilities to respond to incidents involving hazardous materials throughout the state.

The Task Force membership included representatives of interested state agencies, local government, industry (chemical manufacturers, chemical users, transportation) and environmental and emergency response interests. The Task Force was formed into five groupings:

Steering Committee
Emergency Response Work Group
Enforcement and Regulation Work Group
Funding Work Group
Training and Prevention Work Group

Although the Task Force met in several plenary sessions, the Work Groups did the detailed studies under the guidance and review of the Steering Committee. This report contains the findings and recommendations of the Task Force.

DISCUSSION

EMERGENCY RESPONSE

The Task Force reviewed the report submitted in November 1985 and found that the findings outlined in that report were valid.

The areas of the Commonwealth with the greatest amount of truck traffic, major rail activities, and larger concentrations of industrial facilities using or manufacturing hazardous materials pose the major threats from hazardous materials. Weighing each of these factors, the Task Force divided the Commonwealth into seven geographical areas and ranked them according to the overall potential for hazardous materials accidents within each area. In descending order the ranking is:

1. Central Piedmont
2. Northern Virginia
3. Roanoke/New River Valley
4. Peninsula/Tidewater
5. Shenandoah Valley
6. South Central
7. Southwest Virginia

There are only eleven jurisdictions in the Commonwealth that have hazardous materials emergency response teams. Although there is a need to have hazardous materials technical response capabilities in each area of the state, there is not a need to have a hazardous materials emergency response team in each jurisdiction. A network of regional hazardous materials response teams could provide adequate technical response throughout the state.

Existing hazardous materials emergency response teams should be used, where possible, as the bases for regional response teams. In five of the geographical areas delineated above, local governments which have hazardous materials teams have expressed a willingness to participate in the regional response team program. In the other two areas, local governments are willing to participate but do not have response teams.

As an incentive for participation in the program, equipment and training for the teams should be funded on a state/local cost share basis. Percentages should be negotiated and should be based on several factors to include the fiscal stress of the local government.

Government, industry, trade associations, and the general public, each have an interest in the development and implementation of the hazardous materials program. There should be a medium for these groups to participate in the program. Establishing a hazardous materials advisory council with membership representing the varied interest would provide for this medium.

The hazardous materials program involves at both state and local government levels each of the emergency services disciplines - fire, police, emergency medical, and emergency management. To be more effective, the program should be coordinated by one agency at the state level and through one individual at the local level. The Department of Emergency Services' legal mandate cuts across all emergency services disciplines; it would be an appropriate coordinating agency for the hazardous materials program at the state level. At the local level, the appointment of an individual as the coordinator for the hazardous materials program would not conflict in responsibilities already delineated such as those for fire officers at a hazardous materials incident site.

There is an existing hazardous materials team in each of the four geographical areas of the state which have greater potential for hazardous materials accidents; these teams could be used as bases for forming regional response teams. Priority should be placed on bringing these teams up to standard while organizing and training teams in the areas where there are none. It will take some time to train personnel to desired standards and to equip the teams fully. Recognizing this, phasing the establishment of all of the teams to 100% of equipment over a three-year period would be cost effective and provide for response capabilities in each area of the state as quickly as can reasonably be expected.

TRAINING AND PREVENTION

Local administrators are not always aware of the potential for a serious hazardous material incident in their localities and frequently are not aware of the personnel, time, equipment and funding requirements for developing a response capability. A public education program on this type of information should be developed for presentation to local elected and appointed officials.

Current regulations require every law enforcement officer to take forty hours of in-service training every two years. Only eight hours of the forty are devoted to prescribed subjects. The remaining thirty-two hours can be used by agency administrators. If part of the thirty-two hours were devoted to Hazardous Materials Identification and Preliminary Action training, all law enforcement officers required to take in-service training would receive the training in two years. Concurrently, the hazardous materials course could be made part of the training for recruits. In this manner, all law enforcement officers will receive this level of hazardous materials training.

Hazardous materials training in the National Fire Protection Association national standards used by the Department of Fire Programs for training fire service personnel first appears in the Fire Officer II standards. In many cases, particularly in volunteer organizations, the first responsible firefighter on the scene may not be an officer but, in terms of length of service, a senior firefighter. Based on this, the training needed by those arriving on the scene first should be offered to fire fighting personnel sooner than Officer II.

In other than the fire service, there needs to be those who are trained to take control of a hazardous materials situation, evaluate it, and start defensive actions or call for a response team depending on the level of severity of the situation. Although the fire service will frequently be first on the scene and perform this function, this may not always be the case and other first responders should be able to fill the void. Level II hazardous materials training would provide the needed instruction for these individuals and should be a part of the training programs for rescue and emergency medical squads.

The individuals making up the command and control group of a hazardous materials incident need "incident command systems" training. This training should be developed to include the chief administrative officer of the locality, the emergency response department heads, and department heads whose operations will be affected by the situation or who will be involved in support activities during the incident.

There are no reliable hazardous materials incident data available to use for making informed decisions. A number of state agencies obtain information about hazardous materials situations. This information is agency specific and is gathered because the agency has some regulatory responsibility about which it must make periodic reports. A singular hazardous materials data collection system should be developed to provide reliable information upon which to make decisions.

ENFORCEMENT AND REGULATION

There is no current set of data about hazardous materials incidents, the degree of carrier compliance with state and federal safety regulations, the efficacy of law enforcement efforts and the capability of emergency response in the Commonwealth.

Most hazardous materials transportation incidents result from a violation of motor carrier safety regulations. The Department of State Police has primary responsibility for enforcement of motor carrier safety regulations. An increase in State Police resources committed to motor carrier safety would be an important initiative in hazardous materials transportation safety.

Increased response capability and preventative enforcement will not occur without legislative action. A hazardous materials legislative program should be developed for consideration by the General Assembly in its 1987 session.

FUNDING

Considering that a broad spectrum of the population uses and benefits from the safe usage of hazardous materials, the most generally acceptable source for the hazardous materials program is the state general fund. However, in the light of current constraints on the general fund for program expansions and new initiatives, the use of nongeneral funds for hazardous materials programs should be maximized.

The Virginia Disaster Response Fund is already established by law and is suitable for expenditures by the Department of Emergency Services (DES) in hazardous materials incident response. DES should make the fund as self-sufficient as possible by maximizing recovery of costs for incident response.

RECOMMENDATIONS

The Task Force recommends that:

R-1. A statewide network of regional hazardous materials emergency response teams be established. (see page 11)

R-2. Insofar as possible, existing hazardous materials emergency response teams be used as the bases for regional response teams. Funding for equipment and training be on a state/local cost sharing basis. (see page 14)

R-3. The Department of Emergency Services be designated to coordinate the state hazardous materials emergency response program. (see page 16)

R-4. A state Hazardous Materials Advisory Council be established to provide oversight of the state hazardous materials emergency response program. (see page 18)

R-5. A Hazardous Materials Coordinator be appointed in each local jurisdiction. (see page 19)

R-6. The regional response team program be implemented in phases over a three year period as follows: (see page 20)

a. First Year - July 1, 1987 - June 30, 1988

(1) 75% of equipment to Central Piedmont, Northern Virginia, Roanoke/New River Valley, Peninsula/Tidewater (priorities 1 thru 4) areas.

(2) 25% of equipment to Shenandoah Valley, South Central, Southwest Virginia (priorities 5 thru 7) areas.

b. Second Year - July 1, 1988 - June 30, 1989

(1) Remaining 25% of equipment to priorities 1 thru 4 areas.

(2) 50% of equipment to priorities 5 thru 7 areas.

c. Third Year - July 1, 1989 - June 30, 1990

Remaining 25% of equipment to priorities 5 thru 7 areas.

T-1. A public education program be developed for presentation to the chief administrators and elected officials of counties, cities, and towns and the senior level administrators of emergency response agencies operating in localities. (see page 22)

T-2. Hazardous Materials Identification and Preliminary Action (Level I) training be required for all potential first responders; Hazardous Materials Incident Analysis and Limited Control techniques (Level II) training be required for selected members of fire departments and rescue squads; and Hazardous Materials Response Team (Level III) training be required for members of regional response teams. (see page 24)

T-3. A plan be developed to deliver Level I training to first responding personnel using probability of an incident information to establish the schedule for the training. (see page 25)

T-3A. Hazardous Materials Identification and Preliminary Action (Level I) training be incorporated into the mandatory training requirements which must be met by law enforcement officers. (see page 26)

T-3B. The Department of Fire Programs revise its Firefighter III standards to include Level I training. (see page 27)

T-4. A plan be developed to deliver Level II training using probability of an incident information to establish the schedule for the training. (See page 28)

T-4A. The Department of Fire Programs place Level II training in its Fire Officer I certification program. (see page 29)

T-4B. Level II training be inserted in the training programs of agencies or organizations other than fire departments and companies which in the normal course of their duties may find their personnel in a position when they must participate in the activities encompassed in this level of training. (see page 30)

T-5. Complete development of Level III training. (see page 31)

T-6. Development of Hazardous Materials Incident Management (Level IV) training be completed by March 1, 1987. (see page 33)

T-7. A hazardous materials incident reporting system be developed and assigned to some agency at the state level of government. (see page 34)

E-1. Conduct a multi-modal study of transportation of hazardous materials in Virginia, examining both the flow of hazardous materials and accident data. (see page 35)

E-2. Increase State Police resources committed to the Motor Carrier Safety Program. (see page 36)

E-3. Develop a hazardous materials legislative program for consideration by the General Assembly in 1987. (see page 37)

F-1 The use of nongeneral funds for the hazardous materials program be maximized (see page 38)

F-2 The Department of Emergency Services adopt policies to maximize recovery of hazardous materials incident response costs from the Virginia Disaster Response Fund. (see page 38)

EMERGENCY RESPONSE WORK GROUP

I. INTRODUCTION

The Emergency Response Work Group was charged with examining the problems posed by hazardous materials, capabilities to respond to incidents involving hazardous materials, organization for hazardous materials emergency response, and intergovernmental coordination of hazardous materials programs.

The Work Group looked at industrial facilities using or manufacturing hazardous materials and the transportation of hazardous materials via highway and rail. They did not make a detailed study of transportation of hazardous materials via air or inland waterways as it felt that planning for the other modes of transportation would provide adequate response capabilities for incidents involving air or inland waterways transportation.

It is the opinion of the Work Group that although, daily, hazardous materials are transported safely throughout the Commonwealth and are used without mishap in the industrial plants, the potential for accidents involving hazardous materials and for the harm that can be done from an accident is such that action should be taken to ensure the Commonwealth and its local jurisdictions are prepared to handle accidents safely and to keep harmful effects from accidents to a minimum.

II. FINDINGS

A. The Hazardous Materials Problem

The areas of the Commonwealth with the greatest amount of truck traffic, major rail activities, and larger concentrations of industrial facilities using or manufacturing hazardous materials pose the main threats from hazardous materials and are the principal concerns in planning emergency response to hazardous materials accidents - i.e. - accidents/incidents involving hazardous materials.

B. Response Capabilities

1. There are only eleven local jurisdictions in the Commonwealth that have hazardous materials emergency response teams. The capabilities of these teams vary with the better teams being in metropolitan areas.

2. Most industrial facilities have "in-plant" capabilities for emergency response but depend on nearby local jurisdictions for response to large incidents. The industrial companies are willing to help in hazardous materials accidents that involve their products but assistance consists more of advice and expertise on a product than material aid. In any case, the initial response falls on local jurisdictions with the next level of response dependent upon the state and/or one of the existing hazardous materials emergency response teams.

3. Although there is a need to have hazardous materials technical response capabilities available across the state and, in particular, for the jurisdictions that have the greatest potential for hazardous materials accidents, there is no need to have a hazardous materials response team in each jurisdiction. If local responders have received Levels I and II training, technical response does not have to be as immediate as other emergency responses.

4. A network of regional hazardous materials emergency response teams with reasonably established response times and distances can provide adequate technical response throughout the state.

5. Personnel requirements and costs for equipping, training, and maintaining a hazardous materials emergency response team are too much for most local jurisdictions. In addition, the number of hazardous materials emergencies is such that it is not cost effective to have a hazardous materials response team in each local jurisdiction.

6. Most of the local jurisdictions which currently have hazardous materials response teams are willing to participate in a state regional response network.

7. Several of the jurisdictions which have paid fire departments and which do not have hazardous materials response teams are willing to participate in a regional response team network and in forming teams to do so. Some of these departments would need augmentation to form teams.

CONCLUSIONS

The conclusions of the Work Group are that:

A. There is a need to have hazardous materials technical response capabilities for all areas of the state. Current response capabilities do not satisfy this need.

B. Establishing a statewide network of regional response teams would provide for adequate hazardous materials emergency technical response throughout the Commonwealth.

C. There is sufficient support from local jurisdictions which have hazardous materials emergency response teams or are willing to form hazardous materials emergency response teams to establish a network of regional response teams.

D. Proper training for each responder is necessary to insure that the regional response teams concept can provide the needed response. This training should be Level I for all First Responders; Level II for selected members of fire companies and rescue squads and Level III for the technical response personnel-the members of regional response teams.

RECOMMENDATION R-1

Establish a statewide network of regional, hazardous materials emergency response teams.

PURPOSE

To provide for adequate hazardous materials emergency technical response capabilities throughout the Commonwealth.

DISCUSSION

The potential for hazardous materials accidents (accidents involving hazardous materials) is present in every local jurisdiction of the Commonwealth. The potential is greater in those areas with the larger amount of truck traffic on the highways, major rail facilities, and concentrations of industrial facilities - primarily the larger urban areas. However, in those areas where the potential is less, the consequences of an accident are no less severe and there must be capabilities to respond in these as well as in the areas with the greater potential for hazardous materials accidents.

Notwithstanding the need to have hazardous materials technical response teams (hazardous materials teams) available throughout the state, there is not a need for a team in every jurisdiction. Hazardous materials emergency technical response does not have to be as immediate as other emergency response as long as local first responders have the capability to do basic hazardous materials response while technical response is on its way. This capability can be developed by training personnel in hazardous materials Levels I and II courses. Also, the costs of equipping, training and maintaining a hazardous materials team and the number of personnel involved are such that only the larger jurisdictions or groups of smaller jurisdictions can afford to have a hazardous materials team.

A regional hazardous materials response team network of seven regional areas would provide for adequate technical response throughout the Commonwealth.

At Attachment 1 is a map outlining proposed general geographical areas for regional response teams.

KEY FACTS

Nearly every area of the state is affected by one of the factors which pose the main threats from hazardous materials.

The highways that have the larger amount of truck traffic and, thus, a greater potential for hazardous materials accidents than other highways crisscross the state. These highways are:

a. The main through interstate highways - 95, 81, 64

b. Interstate 495 in Northern Virginia

c. The east/west US routes--50 in the north, 460 in the central part of the state, and 58 in the south.

d. US route 29 running north/south in the central portion of the state.

Along these highways there are some fourteen (14) population centers which have more truck traffic and a resulting greater potential for hazardous materials accidents than other areas. These areas are the counties listed here and contiguous cities and counties:

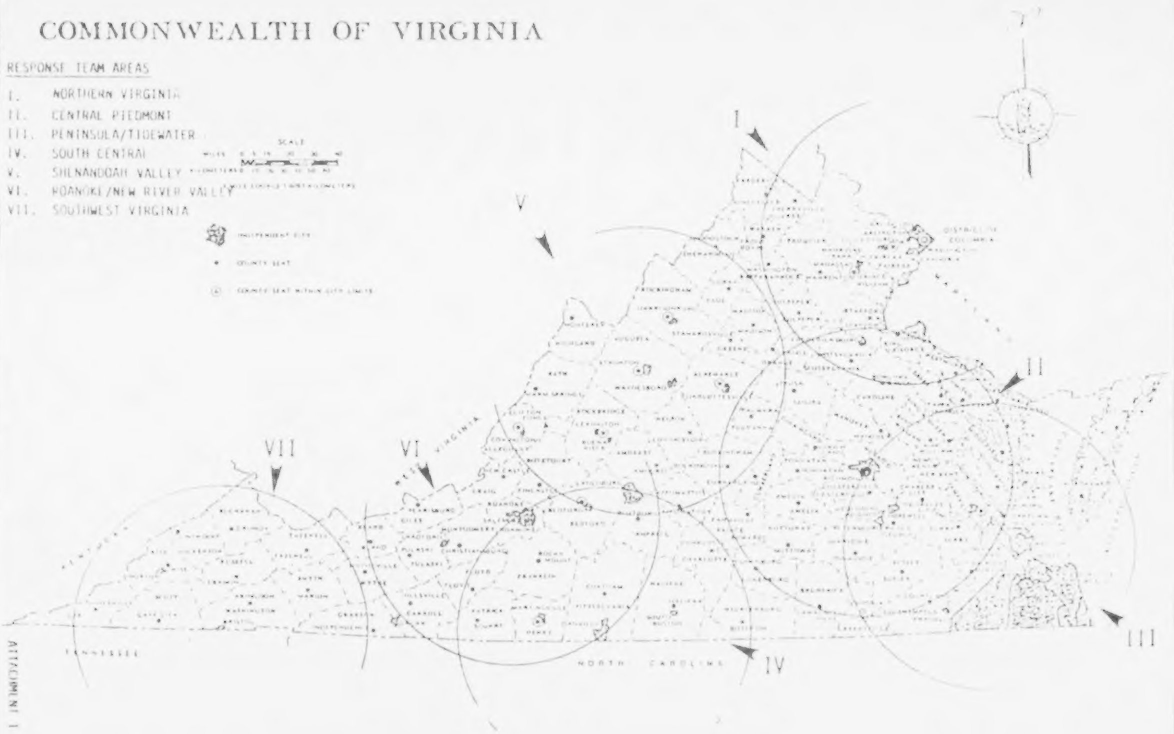
Fairfax
Chesterfield
Rockbridge
Wythe
Botetourt
Roanoke
Prince William
Montgomery
Fauquier
Pulaski
Pittsylvania
Campbell
Loudoun
Giles

The areas with highest potential for rail accidents involving hazardous materials are:

Arlington
Norfolk
Richmond
Roanoke
Emporia
Newport News
Portsmouth
St. Paul (in Wise County)
Martinsville
Waynesboro

With few exceptions, the larger concentrations of industrial facilities are in those areas which have the heavier truck traffic and greater potential for rail accidents involving hazardous materials. Considering the potential for hazardous materials accidents posed by truck traffic, rail activities, and industrial facilities, following is a listing of the proposed regional response team areas in descending order of overall potential for hazardous materials accidents.

1. Central Piedmont
2. Northern Virginia
3. Roanoke/New River Valley
4. Peninsula/Tidewater
5. Shenandoah Valley
6. South Central
7. Southwest Virginia


COMMONWEALTH OF VIRGINIA
RESPONSE TEAM AREAS
I. NORTHERN VIRGINIA
II. CENTRAL PIEDMONT
III. PENINSULA/TIDEWATER
IV. SOUTH CENTRAL
V. SHENANDOAH VALLEY
VI. ROANOKE/NEW RIVER VALLEY
VII. SOUTHWEST VIRGINIA
SCALE
INDEPENDENT CITY
COUNTY SEAT
COUNTY SEAT WITHIN CITY LIMITS
DISTRICT OF COLUMBIA
WEST VIRGINIA
KENTUCKY
TENNESSEE
NORTH CAROLINA
I
II
III
IV
V
VI
VII

ATTACHMENT 1

PROPOSED GENERAL GEOGRAPHICAL AREAS FOR REGIONAL RESPONSE TEAMS

RECOMMENDATION R-2

Use existing hazardous materials emergency response teams, where possible, as the bases for regional response teams. Fund equipment and training for the teams on a state/local cost share basis.

PURPOSE

To use existing resources to a maximum, reduce duplication, and to provide incentives for local participation in the regional response team program.

DISCUSSION

There are eleven local jurisdictions which have hazardous materials teams. Most of these jurisdictions have expressed a willingness to participate in the regional hazardous materials response team program. Use of these units would provide regional response teams in several of the regions quicker than if the teams were formed from scratch and would prevent duplication of capabilities. Cost sharing of expenses for equipment and training should provide an incentive for local governments to participate in the program. The percentage of cost sharing should be negotiated and should be based on several factors to include the fiscal stress of the local government as calculated by the Commission on Local Government.

There are no existing hazardous materials teams in two of the proposed regional areas. Several local governments in these areas have expressed a willingness to participate in the program and to assist in forming regional response teams. The principle of cost sharing should also apply to these jurisdictions with percentages being negotiated as for the jurisdictions with existing teams.

Although this recommendation pertains to regional response teams and cost sharing of their equipment and training, the idea of cost sharing should be applied to local jurisdictions participating in the program which do not furnish response teams. The method and percentages should be developed and recommended by the Hazardous Materials Emergency Reponse Advisory Council. A main theme of the entire program should be local/state sharing of costs.

KEY FACTS

A. Possible sources for forming regional teams:

	Region	Possible Source of Response Team
a.	Northern Virginia	Fairfax County, Alexandria
b.	Central Piedmont	Henrico: Chesterfield
c.	Peninsula/Tidewater	Newport News; Portsmouth*
d.	Roanoke/ New River Valley	Roanoke; Salem; Roanoke County
e.	Shenandoah Valley	Augusta - would need augmentation

*Does not have team; wants to participate

2. New Teams

	Region	Possible Source of Response Team
a.	South Central	Danville: Lynchburg
b.	Southwest Virginia	Bristol-would need augmentation

B. Regional Response Team Organization and Equipment

1. Team Organization

   a. Standard, minimum staffing for each team

   b. 8 individuals minimum per team for incident response: sufficient trained personnel for each team to provide minimum manning for each shift.

2. Team Equipment

   a. Standard minimum equipment for each team

   b. Acquisition costs of equipment - $250,000 per team (1986 dollars)

   c. Maintenance costs - $62,500 annually per team (1986 dollars)

RECOMMENDATION R-3

Designate the Department of Emergency Services (DES) to coordinate the state hazardous materials program.

PURPOSE

To designate one coordinating agency for the state hazardous materials program

DISCUSSION

The hazardous materials program would be a statewide program that involves each of the emergency services disciplines (fire, police, emergency medical, and emergency management), local government, and agencies of state government. To be most effective and to ensure the best use of resources, the program should be coordinated by one agency at the state level. This agency should be designated by legislation.

The legal mandate of DES cuts across all emergency services disciplines and DES is designated to and does work with a cross section of local, state, and federal agencies in emergency preparedness and response. It is in this frame-up of multi-disciplines and the three levels of government that the hazardous materials program must be developed and coordinated. DES owes no obligation to a particular emergency service or council and is in a better position than other agencies to provide a disinterested approach to the multifacted hazardous materials program.

Designation of the Department of Emergency Services as the coordinating agency for the state hazardous materials program would provide for one agency to oversee the program and would help assure that concerns of each emergency service discipline are given due consideration in development and implementation of the program.

DES, as the coordinating agency, would be responsible for program management to include establishment of the regional teams, development of local and regional plans and programs, coordination of training activities, and coordination of response activities.

KEY FACTS

The Department of Emergency Services would need additional personnel to do the job of coordinating agency for the hazardous materials programs. Personnel requirements and costs are delineated below. Costs include equipment, personnel, and other services costs.

A. Personnel - 10 FTE
One supervisor, 7 regional programs coordinators, one administrative assistant, one fiscal assistant

B. Costs -

First Year	$869,500
Second Year	576,000
Third Year	603.000
Fourth Year	632,000

RECOMMENDATION R-4

Establish a State Hazardous Materials Emergency Response Advisory Council.

PURPOSE

To provide a medium for organizations and groups with interests in hazardous materials to participate in the development and implementation of the state hazardous materials program.

DISCUSSION

State government, local governments, industry, trade associations, and the general public each have an interest in the development and implementation of the hazardous materials program. An advisory council composed of members representing the various activities/organizations would provide the best means of getting input from these diverse interests. The council should concern itself with each aspect of the hazardous materials program including, but not limited to, planning, organization, equipment, training, accident prevention, and enforcement of regulations and should provide advice and assistance to the State Coordinator of Emergency Services as the coordinating official in development and implementation of the program.

Council membership should be representative of local government, industry, the general public, and environmental and emergency response interests. Staff support to the Council would be provided by the Department of Emergency Services. The Council should be able to call upon state agencies for assistance and advice.

Council members would receive reimbursement for travel, lodging, and food costs associated with council activities. These costs and other required expenditures would be paid by the Department of Emergency Services from funds appropriated for that purpose.

KEY FACTS

Costs for Advisory Council Activities:

First Year	$21,930
Second Year	19,480
Third Year	20,420

RECOMMENDATION R-5

Appoint a Hazardous Materials Coordinator in each local jurisdiction.

PURPOSE

To have a focal point within each local jurisdiction for all aspects of the hazardous materials program.

DISCUSSION

The hazardous materials program at the local level involves each of the emergency services disciplines - fire, police, emergency medical, and emergency management. To be effective, the local program should be coordinated through one individual who would be so designated by the local government.

The Hazardous Materials Coordinator should be knowledgeable of the needs of the overall program and of the individual emergency services. The requisite qualifications to meet this requirement should be established by the state coordinating agency upon recommendation of the Hazardous Materials Emergency Response Advisory Council.

The Hazardous Materials Coordinator (HMC) is not intended to replace current individuals in the hazardous materials emergency response organization- the fire officer incident commander and the emergency services director and coordinator; however, the HMC could be any of these individuals. The requirement is to have within the local jurisdiction one knowledgeable individual as the overall coordinator for the hazardous materials program.

KEY FACTS

There are 138 local jurisdictions - 136 cities and counties and two towns - in which a Hazardous Materials Coordinator should be appointed.

RECOMMENDATION R-6

Implement the establishment of the state network of regional hazardous materials emergency response teams in phases over a three year period.

PURPOSE

To establish the state network of regional hazardous materials emergency response teams in priority taking into account the potential for hazardous materials accidents and response capabilities.

DISCUSSION

The four geographical areas (outlined in Recommendation R-1) with the greater potential for hazardous materials accidents each have an existing hazardous materials team which could be used as a base for forming regional response teams. In the other three areas, response teams would have to be organized, equipped, and trained.

A logical method of forming the regional teams would be to put priority on bringing existing capabilities up to standard while organizing and training teams in the areas where they do not exist. Even in those areas of priority it will take some time to equip teams fully, to bring personnel up to desired standards of training, and to establish operating procedures. Establishing the regional response teams network by phasing as outlined below would be cost effective and provide for response capabilities in each geographical area of the state as quickly as can be reasonably expected.

A. First Year (July 1, 1987 - June 30, 1988)

   1. Equip response teams in priorities 1 thru 4 (Central Piedmont; Northern Virginia; Roanoke/New River Valley; Peninsula/Tidewater) areas at 75% of standard equipment list (SEL).

   2. Equip response teams in priorities 5 thru 7 (Shenandoah Valley; South Central; Southwest Virginia) areas at 25% of SEL.

B. Second Year (July 1, 1988 - June 30, 1989)

   1. Priorities 1 thru 4 areas receive remaining 25% of SEL

   2. Priorities 5 thru 7 areas receive an additional 50% of SEL

C. Third Year (July 1, 1989 - June 30, 1990)

1. Priorities 1 thru 4 areas have 100% of equipment.
2. Priorities 5 thru 7 areas receive remaining 25% of equipment.

KEY FACTS

Costs of equipment and maintenance using the three year phasing would be:

First Year	$937,500
Second Year	890,625
Third Year	612,500

RECOMMENDATION T-1

A public education program be developed for presentation to the chief administrators and elected officials of counties, cities, and towns and the senior level administrators of emergency response agencies operating in localities.

PURPOSE

To raise the level of awareness of top-level officials that a hazardous materials incident may occur in their localities.

To make local officials aware of the problems such an occurrence will cause.

To advise local officials of the training and technical assistance available for assisting them in preparing for hazardous materials incidents.

To present options available for developing capabilities to handle hazardous materials incidents effectively.

To motivate local officials to do the planning necessary for coping with such an event.

DISCUSSION

Local administrators are not always aware of the potential for a serious hazardous materials incident in their localities. A public education program does not exist at the state level to provide this information.

Most administrators recognize they need some type of capability to deal with hazardous materials incidents. There is limited awareness of the types and levels of resources such a capability requires.

Local officials ought to be made aware of the personnel, time, equipment and funding requirements for developing a response capability. They need to know the amount of training, the types and limitations of equipment, and the number of people needed to adequately man response teams and that involvement in a hazardous materials response team program is a long-term commitment.

KEY FACTS

Local officials need to be made aware of the implications of hazardous materials in terms of danger to community, resources needed to cope with a situation, and how they may be affected.

It is envisioned that invitations to attend this program will be sent to elected officials, chief administrative officers of counties and cities, and key staff members of those administrators. Key staff members are considered to be fire chiefs, police chiefs, utility and public works department directors, attorneys, and others that would have a command post assignment in a hazardous materials incident.

RECOMMENDATION T-2

Require Hazardous Materials Identification and Preliminary Action (Level I) training for all first responders, Hazardous Materials Incident Analysis and Limited Control (Level II) training for selected members of fire departments and rescue squads, and Hazardous Materials Response Team (Level III) training for members of regional response teams.

PURPOSE

To provide an appropriate level of training for each phase of response.

DISCUSSION

The regional response team concept is based on the premise that local responders -- first responders, fire companies and rescue squads -- are sufficiently trained to perform initial response actions of recognition, personal and personnel safety, and basic defensive actions. This allows the regional response team time to respond from its location and to concentrate on technical response activities. For this premise to be valid, first responders must be Level I trained and selected members of fire companies and rescue squads Level II trained.

Members of the regional response team should be trained in technical response and this can be accomplished through Level III training.

KEY FACTS

Level I training has been taught since May 1984 and Level II since mid-1985. There are still a great number of individuals who have not received the training. Level II training for rescue squads is being developed. A first priority should be to put emphasis on these courses and get the basic hazardous materials knowledge base in place as the rest of the hazardous materials program starts up.

RECOMMENDATION T-3

Develop a plan to deliver Hazardous Materials Identification and Preliminary Action (Level I) training to first responding personnel using the present probability-of-an-incident information as the basis for establishing the schedule of the training.

PURPOSE

To provide first responder training on a priority basis to the localities which have the highest probability of having a hazardous materials incident.

To get this level of training to as many emergency responders as possible as rapidly as possible.

DISCUSSION

The best information available indicates there are about 22,000 firefighters, 11,000 law enforcement officers, and 14,000 rescue squad members in Virginia. At any given time any one of these individuals can be the first person at the site of a hazardous materials incident. That person, for the first moments after arrival, may be responsible for the safety of victims, spectators, and surrounding residents.

The first action of this person is to start the process of protecting life, followed by protecting property. To do these things, the individual must know what the material is, what its potential for harming life and property is, and what immediate actions must be taken consistent with the objectives to preserve life and property.

To do this requires basic knowledge, skills, and abilities to learn what the substance is, what its potential for harm is, and the proper procedures to follow to prevent loss of life and property.

KEY FACTS

Approximately 22,000 firefighters, 11,000 law enforcement officers, and 14,000 rescue squad members could be the first arrivals at a hazardous materials incident. These people must know how to protect themselves, protect those they are trying to help, and prevent property damage. This requires certain basic information and training which can be provided in a 16-hour training course.

RECOMMENDATION T-3A

Incorporate Hazardous Materials Identification and Preliminary Action (Level I) training into the mandatory training requirements which must be met by law enforcement officers.

PURPOSE

To provide all law enforcement officers, the first level of training and the level which is most important to their safety and to the safety of the immediate population in the earliest phases of a hazardous materials incident.

NOTE: Law enforcement training is performance based and does not have mandatory instruction hours for courses. In a discussion with the individual in charge of training program development in the Department of Criminal Justice Services, it was requested that this recommendation be worded in a manner which would accommodate that philosophy.

DISCUSSION

Law enforcement has the best vehicle for providing hazardous materials training to its personnel within an identifiable time frame.

Regulations require every law enforcement officer to take 40 hours of in-service training every two years. Eight hours of this is devoted to prescribed subjects. The remaining 32 hours can be used for subjects selected by agency administrators. If sufficient hours could be devoted to Hazardous Materials Identification and Preliminary Action training, all law enforcement officers required to take in-service training would receive the training in two years.

Concurrently the course could be made part of the training for recruits. In this manner, all law enforcement officers will receive this level of hazardous materials training.

KEY FACTS

Approximately 11,000 law enforcement officers can receive hazardous materials training through training they must receive either in the 40 hours of mandated in-service training they must attend every two years or as recruits in mandated basic training.

RECOMMENDATION T-3B

The Department of Fire Programs revise its Firefighter III standards to include Hazardous Materials Identification and Preliminary Action (Level I) training.

PURPOSE

To provide the first level of hazardous materials training to fire service personnel earlier in their training than is presently done.

To recognize how important this training is for early responders by placing it earlier in training programs than is now the case.

DISCUSSION

National Fire Protection Association (NFPA) national standards used by the Department of Fire Programs for training fire service personnel do not have any hazardous materials training for Firefighter I, II, III and Fire Officer I. This training first appears in the Fire Officer II standards.

In many cases, particularly in volunteer organizations, the first responsible firefighter on the scene may not be an officer but, in terms of length of service, a senior firefighter. Based on this, the training needed by those arriving on the scene first should be offered to fire fighting personnel sooner than Fire Officer II. This has application whether the personnel are paid or volunteer.

KEY FACTS

The nature of the fire service, both paid and volunteer, makes it quite possible that a qualified fire officer may not arrive on the scene before a firefighter. Since hazardous materials training under NFPA standards used in Virginia does not include hazardous materials until Fire Officer levels of training, it is appropriate that the training be moved down to the firefighter level.

RECOMMENDATION T-4

Develop a plan to deliver Hazardous Materials Incident Analysis and Limited Control Techniques (Level II) training using the present information available as to the probability of an incident occurring as the basis for establishing the schedule of the offerings.

PURPOSE

To provide training to personnel which will permit them to safely and effectively control and contain a hazardous materials situation on a limited basis and within the scope of the objectives of this training.

To provide this level of training to those individuals selected by local fire departments and companies.

DISCUSSION

Once the first objectives of protecting life and property have been accomplished, the next steps for containing, controlling, and abating the situation can be started. There are basic techniques which can be used for these purposes. Training for this includes, but is not limited to, such things as damming, diking, absorbing, and over-packing.

This training is not needed nor should it be available to everyone. It should be for those who are most likely to respond to a call, will be conscientious about taking the training, and have the initiative to keep their skills at a high level of performance.

Those attending this training should be selected by the chief officer of the organization to which they belong.

KEY FACTS

A cadre of people needs to be developed which can take early defensive actions to control the extension of small incidents or to support response teams at more serious incidents. This training should be available only upon designation by department chiefs.

RECOMMENDATION T-4A

The Department of Fire Programs places Hazardous Materials Incident Analysis and Limited Control Techniques (Level II hazardous materials training) in its Fire Officer I certification program.

PURPOSE

To train "company" grade officers to make better analyses of incidents and take initial steps for controlling them.

To provide training for "company" grade officers so they will be better prepared to assist response teams which may have to be called to handle an incident because of the degree of its seriousness.

DISCUSSION

Usually the fire officer first arriving at an incident is a "company" grade officer. Training for this grade of officers in the NFPA standards is at the Fire Officer I level. Hazardous materials training for fire officers does not appear in the NFPA standards until Fire Officer II or the level of officer above the "company" officer.

Training offered in Virginia's Hazardous Materials Identification and Initial Action (Level I hazardous materials training) meets the NFPA Fire Officer II hazardous material standard. Based on this, a firefighter who has completed Hazardous Materials Identification and Initial Action has taken the training required to meet the NFPA Fire Officer II standard.

"Company" grade officers are in need of a higher level of training which will prepare them to make better evaluations of incidents and start containment and control activities within the limits of the training received.

KEY FACTS

The NFPA standards presently used in Virginia establish a level of training at the fire officer level that is more appropriately placed at the fire fighter level. This is recommended elsewhere. Fire officers should be trained to take control of a situation, evaluate it, and begin defensive tactics or call for a response team depending on the degree of severity of the situation.

RECOMMENDATION T-4B

Hazardous Materials Incident Analysis and Limited Control Techniques (Level II hazardous materials training) be inserted in the training programs of agencies or organizations other than fire departments and companies which in the normal course of their duties may find their personnel in a position when they must participate in the activities encompassed in this level of training.

PURPOSE

To ensure that personnel who would not normally engage in controlling an incident but may find themselves in such circumstances have adequate training in the appropriate technique.

DISCUSSION

Generally fire service or law enforcement personnel will be the primary actors in hazardous materials incident control actions. However, there are other personnel which, for their own protection, for the protection of those they are attempting to assist, or in the course of their having to perform a given task, should have training which will permit them to perform at this level of activity at a hazardous materials incident. This is particularly true in the case of rescue and medical assistance personnel. It is less possible in non-emergency service providers; however, there are circumstances when even these types will have to be pressed into service to gain control of the situation or to keep additional damage or harm to occur. Public utility personnel, public works personnel, and highway personnel are some that are envisioned to be in this group.

These people need to be trained to perform, if the necessity presents itself, in an adequate and appropriate manner.

KEY FACTS

In other than the fire service there needs to be those who are trained to take control of a hazardous materials situation, evaluate it, and start defensive actions or call for a response team depending on the level of severity of the situation. Although the fire service will frequently be first on the scene and perform this function, this may not always be the case and other first responders should be able to fill the void.

RECOMMENDATION T-5

Complete the development of Hazardous Materials Response Team (Level III) training based on the premise that individuals receiving this training will have successfully completed Hazardous Materials Identification and Hazardous Materials Incident Analysis and Limited Control Techniques training courses and will have been specifically designated to take the training by the chief administrative officer of the locality from which they come.

PURPOSE

To provide training which will qualify specifically-designated people to operate as a member of a Hazardous Materials Response Team established according to the standards and guidelines developed under the state Hazardous Materials Emergency Response Program.

To support the state's need to assure that adequately-trained people are available to handle hazardous materials incidents at the highest level of seriousness or danger.

DISCUSSION

In most cases the procedures learned in Hazardous Materials Identification and Initial Action and/or Hazardous Materials and Limited Control Techniques will be sufficient. On the other hand, there will be incidents which will require highly-trained people working together to contain, control, and abate the situation.

Highly-trained people must be used when the substance is known to be dangerous -- toxic, corrosive, or combustible or any combination thereof. Frequently the need for them is when proper identification of the substance(s) involved is extremely difficult and "worst case" procedures become the rule. Another need for this high level of training is stabilization and containment operations.

This training will be the most expensive offered. It will be offered on a limited basis. The limitations being that the individual has to be a member of a hazardous materials emergency response team.

KEY FACTS

Response team members are those who will enter the "hot zone" of a hazardous materials situation. They must be carefully selected, in good physical condition, and highly trained. This is not a program for everyone and will be expensive, both in terms of original training and on-going training, to keep current in necessary techniques.

Work has been done on the development of the Level III training course. It should be completed by the time the regional response teams are ready to take the training.

RECOMMENDATION T-6

Complete the development of Hazardous Materials Incident Management (Level IV) training by March 1, 1987.

PURPOSE

To provide a program for training top-level local government officials including, but not limited to, county, city, and town administrators and the heads of departments who will be the command and control group in the event of a hazardous materials incident in a locality.

To teach local officials who will be in command and control groups in the event of a hazardous materials incident the principles of planning for and commanding such an operation.

To stress to local officials the necessity of pre-planning and being prepared for a hazardous materials incident.

DISCUSSION

Every incident needs a command and control structure. Sometimes this will be a simple uncomplicated one. At other times, it will be quite complex. The seriousness of the situation, the time it will take to terminate it, and the number of elements involved drive the level of command and control required.

Each level of hazardous materials training has tactical command and control techniques interspersed in the training. There comes a time, however, when the number of people on the scene and the number of activities going on require activation of more than the usual field command officers. The point at which this happens should be clearly defined in planning for hazardous materials incidents.

The individuals making up the command and control group need "incident command systems" training. This training should be developed to include the chief administrative officer of the locality, the emergency response department heads, and department heads whose operations will be affected by the situation or who will be involved in support activities during the incident.

KEY FACTS

This training is the last module to be developed. An outline has been completed and distributed to a large number of knowledgeable people for their review and comment. When this process is over, there should be little difficulty in completing the course material. This training will be critical for those who will deal with incidents from the strategic level of command.

RECOMMENDATION T-7

A hazardous materials incident reporting system should be developed and assigned to some agency at the state level of government.

PURPOSE

To develop a data base which will provide reliable information to decision makers about the hazardous materials problem.

DISCUSSION

There are no reliable hazardous materials incident data available to use for making informed decisions. A number of state agencies obtain information about hazardous materials situations. This information is agency specific and is gathered because the agency has some regulatory responsibility about which it must make periodic reports. There is no agency which by law must be provided reports of hazardous materials incidents. Mandatory reporting, similar to vehicle crash reporting to Department of Motor Vehicles, is the solution which is most frequently mentioned to solve this problem. However, before reporting is mandated, other methods of getting the information should be explored.

KEY FACTS

One of the deficiencies noted in attempting to identify the scope of the hazardous materials problem has been the lack of basic incident data. Without this data, decision making has been difficult. A data collection system needs to be developed to eliminate this deficiency.

RECOMMENDATION E-1

Conduct a study of multi-modal transportation of hazardous materials in Virginia, examining both the flow of hazardous materials and hazardous materials accident data in the state.

PURPOSE

To provide current data needed to develop hazardous materials regulation and enforcement policy.

DISCUSSION

Currently, data on hazardous materials transportation safety are limited to information collected coincidentally with fire and accident reports. The information suggests that the number of accidents involving hazardous materials is low relative to the number of miles and vehicles traveling through the state. However, the relative safety of hazardous materials transportation does not relieve government and industry of the responsibility to make improvements. While probabilities of an accident may be low, given the nature of some hazardous materials, the potential severity of consequences of an accident demands continued efforts towards improvement.

Incremental increases in safety are likely to be achieved only through precisely-targeted efforts. Care should be exercised not to adopt new policies that might decrease the safety level.

KEY FACTS:

There are no data about hazardous materials incidents, the degree of carrier compliance with state and federal safety regulations, the efficacy of law enforcement efforts, and the capability of emergency response in the Commonwealth.

RECOMMENDATION E-2:

Increase the level of resources committed to the Motor Carrier Safety Program of the State Police.

PURPOSE:

To improve transportation safety through cost effective increases in hazardous materials transportation enforcement.

DISCUSSION:

The Motor Carrier Safety Act of 1984, 98 Stat. 2829, authorized promulgation of regulations to promote commercial motor vehicle safety. In Virginia, the federal regulations have been adopted with only slight modification . The Department of State Police is responsible for enforcing the federal regulations.

The regulatory framework established by the Commonwealth of Virginia is adequate to ensure hazardous materials safety; however, enforcement of the extant regulations is essential. Most hazardous materials incidents in Virginia involve the violation of Federal Motor Carrier Safety Regulations.

Motor carrier safety law enforcement is potentially the most important state initiative in increasing hazardous materials transportation safety. The Office of Technology Assessment found, in preparing its report, "Transportation of Hazardous Materials," that truck driver error was by far the single greatest cause of hazardous materials incidents, just as truck driver error was by far the single greatest cause of non-hazardous materials truck accidents. Rigorous enforcement of the laws regarding big trucks may be the most effective initiative that could be undertaken in hazardous materials transportation safety.

KEY FACTS:

Most hazardous materials transportation incidents result from a violation of Federal Motor Carrier Safety Regulations. In fact, over 90 percent of all hazardous materials incidents in the United States during the past four years have resulted from non-compliance with highway safety laws.

Additional personnel assigned to the State Police Motor Carrier Safety Program would allow increased enforcement of regulations. This should help reduce the number of highway transportation accidents involving hazardous materials in the Commonwealth.

RECOMMENDATION E-3:

Develop a hazardous materials legislative program to be considered by the 1987 General Assembly session.

PURPOSE:

To implement the recommendations of the Hazardous Materials Task Force to ensure increased hazardous materials safety in Virginia.

DISCUSSION:

Increased response capability and preventive enforcement will not occur without legislative action. If the Task Force's report is not transformed into legislation and public policy, the work will have been in vain when a Virginian is killed or injured in a hazardous materials accident that could have been prevented through adoption of the recommendations.

KEY FACTS:

The Virginia program of adopting the federal regulations regarding hazardous materials transportation safety is the appropriate regulatory policy for the commonwealth. Rigorous enforcement of federal regulations, coupled with an expanded emergency response capability, however, is required to gain benefits in reduced injury and death from hazardous materials incidents.

FUNDING WORK GROUP

The funding work group was composed of the following members: Walt Smiley, Chairman, of the Department of Planning and Budget, Michael Cline of the Department of Emergency Services, Robert Field of the Virginia Municipal League, Jill Pope of the Virginia Association of Counties, and Thomas Hudson, Vice-President, Virginia Manufacturers Association.

The funding work group met on July 7, August 4, and September 9, 1986. Topics examined and discussed included existing and alternative funding sources, local government funding methods and incentives, workmen's compensation and insurance liability issues, enabling legislation and possible amendments.

SUMMARY OF RECOMMENDATIONS

F-1. Maximize the use of non-general funds for hazardous materials purposes.

- A. Supplement non-general fund revenue sources with general fund money, but only as a last resort.
- B. Study the feasibility of alternate sources of revenue.

F-2. Require the State Coordinator, in administering the Virginia Disaster Response Fund, to adopt policies to maximize recoveries in order to offset the cost of possible unrecoverable incidents and to recover the cost of Fund administration.

Table I depicts recommended funding needs for the first three years of the proposal.

TABLE I
FUNDING NEEDS
VIRGINIA HAZARDOUS MATERIALS EMERGENCY RESPONSE PROGRAM

PROPOSED EXPENDITURES

ITEM	FIRST YEAR (87-88)	SECOND YEAR (88-89)	THIRD YEAR (89-90)
Regional Teams			
Equipment			
Yr.1 = 4 @ 75%	$ 750,000	$ -0-	$ -0-
3 @ 25%	$ 187,500	$ -0-	$ -0-
	$ 937,500	$ -0-	$ -0-
Yr.2 = 4 @ 25%	$ -0-	$ 250,000	$ -0-
3 @ 50%	$ -0-	$ 375,000	$ -0-
	$ -0-	$ 625,000	$ -0-
Yr.3 = 3 @ 25%	$ -0-	$ -0-	$ 187,500
Maintenance	$ -0-	$ 265,625	$ 425,000
Subtotal	$ 937,500	$ 890,625	$ 612,500
State Management			
10 FTE & Equip.	$ 869,500	$ 576,000	$ 603,000
Advisory Coun.	$ 21,930	$ 19,480	$ 20,420
Subtotal	$ 891,430	$ 595,480	$ 623,420
Training	$ 398,000	$ 268,000	$ 268,000
Multi-modal Study	$ 100,000	$ -0-	$ -0-
Cleanup Seed money	$ 50,000	$ -0-	$ -0-
GRAND TOTAL	$ 2,376,930	$ 1,754,105	$ 1,503,920

PROPOSED LEGISLATION

44.146.34 - **Virginia Hazardous Materials Emergency Response Program, Purpose; Department of Emergency Services to coordinate and administer the Virginia Hazardous Materials Emergency Response Program.**

A. The purpose of this chapter is to provide for the development and implementation of a program to protect the health, safety, and welfare of the people of the Commonwealth and of the environment from the threats and potential threats of accidents or incidents involving hazardous materials. This program shall be known as the Virginia Hazardous Materials Emergency Response Program.

B. The Department of Emergency Services shall coordinate and administer the Virginia Hazardous Materials Emergency Response Program.

44.146.35 - **Definitions.**

A. Hazardous materials are substances or materials which may pose unreasonable risk to health, safety, property, or environment when used, transported, stored, or disposed of. They may include materials which are solid, liquid, or gas. Hazardous materials may include toxic substances, flammable and ignitable materials, explosives, corrosive materials, and radioactive materials and include (1) those substances or materials in a form or quantity which may pose an unreasonable risk to health, safety, or property when transported, and which the Secretary of Transportation of the United States has so designated by regulation or order; (2) hazardous substances as defined or designated by law or regulation of the Commonwealth or law or regulation of the United States government; (3) hazardous waste as defined or designated by law or regulation of the Commonwealth.

B. "Department" means the Department of Emergency Services.

C. "Political Subdivision" means any city or county in the Commonwealth and for the purposes of this chapter any town of more than 5,000 population which chooses to have an emergency services program separate from that of the county in which the town is located.

D. "Transport" or "transportation" means any movement of property by any mode and any packing, loading, unloading, or storage incidental thereto.

44.1-6.36 - **Powers and Duties of the Department of Emergency Services.**

The Department of Emergency Services shall:

A. Coordinate the development of hazardous materials training programs and hazardous materials emergency response programs and plans with state and local government agencies and related groups. Those state and local government agencies shall retain those statutory responsibilities assigned elsewhere in this code.

B. Administer the implementation of the Virginia Hazardous Materials Emergency Response Program. The Department shall consider the recommendations of the Hazardous Materials Emergency Response Advisory Council in implementing the program.

44.146.37 - **Coordinator of Emergency Services authorized to enter into agreements with political subdivisions; cost - sharing agreements negotiated.**

The Coordinator of Emergency Services may enter into agreements with political subdivisions to provide hazardous materials emergency response within a specific geographical area of the Commonwealth on a state/political subdivision cost-sharing basis. The cost-sharing agreements shall be negotiated with political subdivisions by the Coordinator.

44.146.38 - **Disbursements for costs and expenses made from Virginia Disaster Response Fund.**

Disbursements for costs and expenses, including, but not limited to, equipment, materials, hazardous materials emergency response operations and immediate accident/incident site cleanup costs and expenses in preventing or alleviating damage, loss, hardship, or suffering caused by accidents or incidents involving hazardous materials, shall be made from the Virginia Disaster Response Fund in accordance with the provisions of Section 44-146.18:1.

The Coordinator of Emergency Services shall promptly seek reimbursement from any party causing or contributing to an accident or incident involving hazardous materials for all sums disbursed from the Virginia Disaster Response Fund for the protection, relief, and recovery from loss or damage caused by such party.

The Coordinator is also authorized to recover any sums expended by any other state agency or political subdivision for preventing or alleviating damage, loss, hardship, or suffering caused by accidents or incidents involving hazardous materials. To recover such sums, the Coordinator shall provide documentation that the costs were incurred whether or not they were actually disbursed from the Virginia Disaster Response Fund.

Section 44-146.39. - **Political subdivisions to appoint Hazardous Materials Coordinator.**

Each political subdivision shall appoint a Hazardous Materials Coordinator. In appointing the Hazardous Materials Coordinator, political subdivisions shall consider the requisite qualifications for Hazardous Materials Coordinators as established by the State Coordinator of Emergency Services upon recommendation of the State Hazardous Materials Emergency Response Advisory Council. The Hazardous Materials Coordinator shall coordinate the hazardous materials emergency response program within the political subdivision.

Section 44-146.40 - **State Hazardous Materials Emergency Response Advisory Council established; members; responsibilities.**

A. There is hereby established the State Hazardous Materials Emergency Response Advisory Council, hereinafter referred to in this chapter as the "Council." The Council shall consist of (1) such state agency heads or their designated representatives as the Governor shall desire to appoint; and (2) nine other members appointed by the Governor; these nine members shall be representative of local government, industry, the general public, and environmental and emergency response interests. Upon initial appointment, three of the nine non-state agency representatives shall be appointed for three-year terms, three shall be appointed for two-year terms, and three shall be appointed for a one-year term; thereafter each shall be appointed for a term of three years.

B. The Department of Emergency Services shall provide staff support for the Council. State agencies shall cooperate in providing assistance and advice upon request of the Council to the Coordinator of Emergency Services. Expenses incurred as a result of Council functions shall be paid by the Department of Emergency Services from an appropriation for that purpose.

C. (1) The Council shall provide programmatic advice to the Coordinator of Emergency Services in the development and implementation of the Virginia Hazardous Materials Emergency Response Program. The Council shall study and make recommendations on all aspects of the Virginia Hazardous Materials Emergency Response Program including, but not limited to, planning, organization, equipment, training, funding, accident prevention and enforcement of regulations.

(2) The Council shall adopt rules and procedures for the conduct of its business.

(3) The Council shall elect a chair from among its members and shall meet at the call of the chair.

National League of Cities
1301 Pennsylvania Avenue NW
Washington D.C.
20004
(202) 626-3000

Officers

President
Pamela P. Plumb
Councilor Portland, Maine

First Vice President
Terry Goddard
Mayor, Phoenix, Arizona

Second Vice President
Bob Bolen
Mayor, Ft. Worth, Texas

Immediate Past President
Cathy Reynolds
Councilwoman-at-Large
Denver, Colorado

Executive Director
Alan Beals

STATEMENT OF

THE HONORABLE VERNA L. CLAYTON

VILLAGE PRESIDENT, BUFFALO GROVE, ILLINOIS

on behalf of

THE NATIONAL LEAGUE OF CITIES

on

TRANSPORTATION OF HAZARDOUS MATERIALS

before the

SUBCOMMITTEE ON SURFACE TRANSPORTATION

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

UNITED STATES HOUSE OF REPRESENTATIVES

May 25, 1988

Past Presidents: Tom Bradley, Mayor, Los Angeles, California • **Henry G. Cisneros**, Mayor, San Antonio, Texas • **Ferd L. Harrison**, Mayor, Scotland Neck, North Carolina • **William H. Hudnut, III**, Mayor, Indianapolis, Indiana • **George Latimer**, Mayor, St. Paul, Minnesota • **Henry W. Maier**, Mayor, Milwaukee, Wisconsin • **Jessie M. Rattley**, Mayor, Newport News, Virginia • **John Rousakis**, Mayor, Savannah, Georgia • **Charles Royer**, Mayor, Seattle, Washington • **George V. Voinovich**, Mayor, Cleveland, Ohio • **Directors: Gary Anderson**, Mayor, Decatur, Illinois • **Sidney J. Barthelemy**, Mayor, New Orleans, Louisiana • **Marjorie A. Boon**, Mayor, Grand Haven, Michigan • **John E. Bourne, Jr.**, Mayor, North Charleston, South Carolina • **Jon C. Burrell**, Executive Director, Maryland Municipal League • **Hal Conklin**, Councilmember, Santa Barbara, California • **Mary Davis**, Councilmember, Atlanta, Georgia • **Ed Eilert**, Mayor, Overland Park, Kansas • **Edward C. Farrell**, Executive Director, New York Conference of Mayors • **Robert Farrell**, Councilmember, Los Angeles, California • **Jan Furner**, Executive Director, Utah League of Cities & Towns • **E. Arthur Gray**, Mayor, Port Jervis, New York • **Glenda E. Hood**, Mayor Pro Tem, Orlando, Florida • **Karen Humphrey**, Councilmember, Fresno, California • **Robert E. Johnson**, Executive Director, North Dakota League of Cities • **Joseph A. Leafe**, Mayor, Norfolk, Virginia • **Charles Lyons**, Chairman, Board of Selectmen, Arlington, Massachusetts • **Melissa Mershon**, Alderman, Louisville, Kentucky • **Bob Overstreet**, Councilmember, Everett, Washington • **Grace Peterson**, Mayor, Pierre, South Dakota • **Dana G. Rinehart**, Mayor, Columbus, Ohio • **John H. Rodriguez**, Councilman, Yuma, Arizona • **Perry Roquemore**, Executive Director, Alabama League of Municipalities • **Steven C. Roberts**, Alderman, St. Louis, Missouri • **James Scheibel**, Councilmember, St. Paul, Minnesota • **Florence Shapiro**, Councilwoman, Plano, Texas • **Dolores Sibonga**, Councilmember, Seattle, Washington • **Joseph A. Sweat**, Executive Director, Tennessee Municipal League • **E.B. Turner**, Mayor Pro Tem, Lumberton, North Carolina • **James Weatherby**, Executive Director, Association of Idaho Cities

Mr. Chairman, members of the Subcommittee: I am Verna L. Clayton, Village President of Buffalo Grove, Illinois and Vice Chair of the National League of Cities Transportation and Communications Committee. I am here today to testify on the transportation of hazardous materials for the National League of Cities and the 16,000 cities and towns in every part of the nation that NLC represents.

The National League of Cities has spent considerable time on this critical and sensitive issue. Two of NLC's policy committees -- Transportation and Communications, and Energy, Environment and Natural Resources -- have discussed, analyzed and adopted national municipal policy on this issue over the past several years. NLC was one of the five groups that initially convened a coalition of state, local government and industry representatives in the development of an alternative hazardous materials transportation proposal. In addition, our organization has had representatives on the National Hazardous Materials Transportation Advisory Council and the Advisory Committee to the Office of Technology Assessment's project, both of which have developed recommendations on the appropriate roles of the various levels of government in dealing with hazardous materials transportation.

Overall, we were pleased with the OTA report on the *Tranportation of Hazardous Materials* and believe their recommendations are largely consistent with the NLC's policies on this issue.

Local View of the Problem of HazMats Transportation

We believe current regulation of the transportation of hazardous materials can only be described as ambivalent. Obviously, no city wants its main thoroughfares to be the principal arteries for the movement of hazardous materials. But, hazardous materials are a fact of modern life and their movement will continue. While local governments would prefer to have sole authority to regulate hazardous materials transport within their boundaries, we understand that a maze of conflicting regulations, requirements, and fees imposes a significant and undue burden on neighboring communities and ultimately makes such transportation unsafe.

The Hazardous Materials Transportation Act (HMTA) has never been implemented in the manner envisioned by this committee. It has been plagued by insufficient personnel and inadequate resources. While the law assumes the Department of Transportation will develop the rules, enforce them and coordinate emergency response, that simply has not been done and is unlikely to be done given current resources. Consequently, regulation of hazardous materials transportation has, by default become the responsibility of state and local governments. The result is confusion, conflict and endless litigation.

The current attempt to regulate the transportation of hazardous material is clearly unacceptable -- both to governments and to industry. No one is sure about their rights or their responsibilities. Smaller cities, without sophisticated legal capacity, are reluctant to regulate hazardous materials transportation in their communities simply because they are uncertain about their legitimate sphere of influence. Other cities are moving ahead with local ordinances which meet their public health and safety needs but often directly and adversely impact neighboring cities and towns. As a consequence, the courts are defining the parameters of responsibility case-by-case and not necessarily with any degree of consistency.

Our priorities are very simple: emergency response capacity and adequate enforcement. Concommitant with addressing these needs, we also believe that it is essential for Congress to clarify the legitimate roles and responsibilities of each level of government with respect to the transportation of hazardous materials.

Emergency Response

Several years ago, a Smithsonian Magazine article stated, "Although the transportation of hazardous materials is clearly a national issue, the burden of preparing for an emergency and responding when one occurs falls squarely on states and localities." When an accident or spill occurs, it is the city fire department, police department, and emergency rescue service which are almost inevitably the ones immediately able to deploy personnel and equipment.

In cities, because of their higher population densities and potential for traffic congestion, the dangers of accidents involving hazardous materials are, if anything, exacerbated. Evacuation, emergency response and remedial actions are many times more complicated in crowded cities. Because we bear the ultimate health and safety responsibility, we must have the fiscal resources to respond effectively. That capacity does not exist and is simply unaffordable in far too many jurisdictions.

As the OTA study points out, "only 25 percent of the nation's two million emergency response personnel have been adequately trained...," a totally unacceptable situation from the perspective of both the individual required to respond to an incident and the community in which such an incident occurs.

While NLC believes that emergency response preparedness should continue to be the primary responsibility of state and local government, several steps can be taken by all levels of government and by industry to improve emergency response capabilities.

First and most importantly, a federal program should be created to provide assistance to localities for training, planning and equipment purchases in order to improve emergency response capacity.

Second, federal, state and local governments should develop one centralized emergency response authority within each of their jurisdictions to enable better inter-jurisdictional communications when an accident does occur. As you undoubtedly know, Congress required creation of state and local emergency response committees under Title III of the newly reauthorized Superfund legislation. Perhaps it would be worth exploring whether the authority of these committees could be expanded to deal with coordination of some of the transportation issues as well.

Third, the federal government should develop an outreach program to explain its regulations to state and local officials and should set minimum training and education standards so that shippers and emergency personnel in all jurisdictions will have common understanding of accident prevention and mitigation.

Fourth, the federal government should provide guidelines for planning for and responding to emergencies and should furnish technical information in an emergency situation.

Fifth, the federal government should evaluate and certify training programs used by regional, state and local emergency personnel.

And finally, industry should be required to participate in education and training efforts, and in accident prevention and response activities. As an inducement to industry participation in emergency response efforts, the federal government should encourage its state and local counterparts to adopt good samaritan legislation limiting industry liability if they do respond to an accident.

Enforcement

The federal government should continue to be responsible for the enforcement of federal manufacturing, testing, repair, and reconditioning standards for hazardous materials containers and packaging, and these standards should apply to all shipments made by the Departments of Energy and Defense as well. Additionally, the federal government should continue to enforce standards for labeling, marking, placarding, designating and classifying hazardous materials. States and localities should have concurrent jurisdiction over vehicle operating requirements and standards; that is, they should be allowed and encouraged to adopt and enforce federal standards and requirements, including the imposition of fines or civil penalties for infractions of these requirements.

To assist states and local government enforcement efforts, Motor Carrier Safety Assistance Program (MCSAP) grants from the Highway Trust Fund should continue to be funded at full authorization levels and made available to state and local governments. Additionally, programs such as the State Hazardous Materials Enforcement Development (SHMED) program, an effective program which was created by the federal government to help states establish hazardous materials transportation inspection and enforcement programs, should be reinstated and adequately funded.

Regulatory Consistency

The federal government should develop performance standards to guide the selection of routes along which hazardous materials can be shipped. State and local governments should have concurrent jurisdiction over routing; that is, they should be permitted to adopt and enforce routing requirements (including time-of-day restrictions, escorting and local bans) which are consistent with these performance standards, unless the state or locality can demonstrate that it has a unique local safety or health circumstance which necessitates passage of a routing requirement inconsistent with the federal standard. To the extent possible, the federal government should encourage the use of public/private sector coordinating councils (such as those established under Superfund), composed of representatives of industry and state and local governments, to promulgate routing requirements and select appropriate routes. Since decisions made by one community can adversely impact a number of surrounding jurisdictions, to the extent possible, routing restrictions should be jointly developed by the affected communities.

Disputes about the consistency of a routing requirement with federal law should be considered by the Department of Transportation which should evaluate inconsistency petitions according to specific criteria (such as the impact of the requirement on interstate commerce and safety), and there should be time limits on the evaluation to expedite decision-making. In a court review, the Secretary of Transportation's decision should be advisory, not binding upon the court.

Funding

As the OTA study indicates, those local jurisdictions that have developed emergency response training programs find these efforts costly. More often than not, these same communities have implemented a licensing or fee system to fund their training programs. As the study mentions, the Santa Clara, California Fire Department raises $268,000, "generated by the license and fee program," for training purposes. The city of Houston, Texas budgets $98,000 of municipal tax revenues for their "hazardous materials team in addition to salary and equipment maintenance expenses."

NLC believes Congress should establish a national trust fund based on a registration fee which will generate sufficient revenues to pay for state and local hazardous materials-related needs such as emergency response planning, training, equipment and personnel. Funds should be distributed to state and local governments based on a formula which takes into account the volume of hazardous materials shipments passing through each jurisdiction annually, and in proportion to the amount of risk that is caused by such shipments.

NLC proposes that to be eligible for funds from the trust fund, a state should demonstrate that:

- it has initiated a program to develop a state-wide emergency response plan that includes transportation incidents (as distinguished from the Superfund requirement for emergency response for fixed facilities);
- designated a lead-agency for administering emergency response activities;
- agreed to assist local governments in emergency planning and response;
- agreed to pass a portion of its hazardous materials entitlement to local governments for planning and emergency response purposes; and,
- established an emergency response coordinating council consisting of state and local governments and industry representatives.

Any state or locality which chooses to accept funds from the hazardous materials trust fund would be precluded from levying its own fees on the transportation of hazardous materials. A locality, which can demonstrate that it has a unique hazardous materials problem or need which is not being satisfied by its federal trust fund suballocation, should be allowed to levy its own fees on the transportation of hazardous materials.

Data Collection

While the recently enacted Superfund amendments will address some of the data needs of local governments -- first, by expanding the body of information on types and quantities of hazardous materials at fixed facilities that will be available to critical state and local government personnel and, second, by enhancing our ability to develop more appropriate emergency response capacity at these fixed facilities, we believe it is only a partial solution and inadequate to meet our needs with respect to transportation of these hazardous substances.

Information about the general nature and quantity of materials being shipped, the general shipment route, and other relevant information about the shipper, including shipments made by the Departments of Energy or Defense, should be collected on an annual basis and disseminated in a manner to be determined by the Secretary of Transportation.

Routing information should also be made available to the local communities on an annual basis. Furthermore, federal, state, regional and local governments should cooperate more closely in the development of a unified data and notification system, such as a single manifest system, and in the exchange of shipment-related information.

There is one other issue I would like to raise, Mr. Chairman. NLC has been working on and advocating improvements in the law regulating transportation of hazardous materials for over seven years. We undertook these efforts as a commitment to former Secretary Lewis to reach agreement on a deficit neutral proposal with both state/local and private support. We delivered -- but, unfortunately, neither the Department, nor the Congress have followed up. We have testified on a number of occasions recommending changes in the law what we believe would improve the regulation of movement of hazardous materials. And, every two years, Congress simply reauthorizes the existing Hazardous Materials Transportation Act. This time, we recommend you reauthorize HMTA through 1989 so that you can spend time next year revising and improving the law outside of the context of an election year.

On behalf of the League of Cities, we appreciate the opportunity to testify before this subcommittee and share our views with you on this critical municipal issue. I would be pleased to answer any questions you may have. Thank you.

NATIONAL LEAGUE OF CITIES
NATIONAL MUNICIPAL POLICY

usage. Current law allows the value of employer-provided commuter services to be excluded from the gross income of employees. NLC opposes the termination of this exclusion.

3. Administration of Federal Transportation Programs

Excessive red tape and the resultant delays in applying for and obtaining federal transportation assistance must be eliminated in order to increase local control and make more effective use of limited financial resources.

D. Land Use and Economic Development

Federal, state, and local transportation policy should recognize that transportation can be a significant factor in influencing the direction and type of urban growth and can facilitate orderly metropolitan growth and desired land use patterns. In order to ensure that the impact of transportation on urban development is beneficial, federal transportation policies should explicitly support national urban conservation objectives.

Federal, state and local policy should recognize that transportation improvements may be utilized as one element of a coordinated package of efforts to revitalize a declining urban area, but that transportation improvements alone will not reverse urban decline and decay. Transportation policy should explicitly support efforts to stabilize and strengthen urban economic and community development.

Federal, state and local policy should encourage the coordinated and joint development of transportation facilities with the areas adjacent to those facilities, and joint public/private development of transportation facilities and surrounding land uses. New federal transportation funds should be made available for the implementation of joint development projects and other projects which seek to coordinate transportation and economic development activities. HUD, EDA, other federal agencies, and the private sector should examine proposed transportation projects to determine if federal and private funds can be pooled and if opportunities for joint development can be exploited.

The feasibility of using local tax incentive mechanisms and land write-downs as a means of encouraging joint development should be examined, and other strategies, such as the use of federal transportation funds as "seed monies," should be explored by all levels of government.

E. Energy

Specific energy policies are contained in Section 2.02 of the Energy, Environment and Natural Resources chapter.

F. Air Quality

Specific air quality policies are contained in Section 2.03 of the Energy, Environment and Natural Resources chapter.

G. Transportation of Hazardous Materials

1. Consolidation of Federal Programs

Overlapping and conflicting hazardous materials regulatory policies should be eliminated and federal agencies involved in the regulation of hazardous materials (such as DOT, EPA, DOE, FEMA and NRC) should coordinate their programs much more closely. As a first step, the Department of Transportation, the Environmental Protection Agency and other appropriate federal agencies should consolidate their lists of hazardous materials, wastes and substances into a single comprehensive listing. In those instances where more than one federal agency regulates a hazardous material, waste or substance, the appropriate agencies should examine existing regulations and take steps to eliminate conflicting or inconsistent policies.

2. Container Standards

The federal government should set stricter standards for hazardous wastes, hazardous materials and radioactive materials containers. Standards which are design specifications should be replaced with functional performance standards which would give manufacturers more latitude in the development of safer containers.

3. Data Collection

Information about the general nature and quantity of materials being shipped, the general shipment route, and other relevant information about the shipper, including, without limitation, shipments made by or under the direction of the United States Departments of Energy or Defense, should be collected on an annual basis and disseminated in a manner to be determined by the Secretary of Transportation.

4. Routing

The federal government should develop performance standards to guide the selection of routes along which hazardous materials can be shipped, including, without limitation, shipments made by or under the direction of the United States Department of Energy or Defense. State and localities should have concurrent jurisdiction over routing; that is they should be allowed to adopt and enforce routing requirements (including time-of-day restrictions, escorting, and local bans) which are consistent with these performance standards, unless the state or locality can demonstrate that it has a unique local safety or health circumstance which necessitates passage of a routing requirement inconsistent with the federal standard. To the extent possible, the federal government should encourage the use of public/private sector coordinating councils, composed of representatives of industry and state and local governments, to promulgate routing requirements and select appropriate routes.

Disputes about the consistency of a routing requirement with federal law should be considered by the Department of Transportation. DOT should evaluate inconsistency petitions according to specific criteria (such as the impact of the requirement on interstate commerce and safety), and there should be time limits on the evaluation in order to expedite decision-making. In a court review, the Secretary of Transportation's decision should be advisory, not binding upon the court.

5. *Frequency*

Maximum effort should be made by the federal government to minimize the number of high level radioactive material shipments, including, without limitation, shipments made by or under the direction of the United States Department of Energy or Defense. The federal government should require a showing of need wherein the shipper must show that the shipment is clearly preferable to other alternatives.

6. *National Hazardous Materials Driver Standards*

To improve the safety of truck transportation of hazardous materials, the federal government should create uniform national truck licensing and training standards for drivers of interstate and intrastate vehicles transporting hazardous materials. As a prerequisite to a license, drivers of such vehicles should be required to certify that they have received special training on hazardous materials handling, routing, and emergency response. Training and licensing standards should be issued by the U.S. Department of Transportation and administered by the states.

Under this approach, states would develop a licensing program that is at least as stringent as the federal standards, administer the training requirements, test potential licensees, collect the licensure fees, enforce the federal standards and exchange license information (in order to prevent multiple licensing) and accident and violations information (in order to create a centralized drivers record) with each other.

7. *Local Notification*

Shippers should be required to give general, not shipment by shipment notification to cities along a prospective route of shipments of hazardous materials, including, without limitation, shipments made by or under the direction of the United States Department of Energy or Defense. Cities receiving routing information from the United States Departments of Energy or Defense should treat such information with the confidentiality necessary to protect national security and eliminate any risk to the public health and safety from the disclosure of such information.

Routing information should also be made available to the local communities on an annual basis. Furthermore, federal, state, regional and local governments should cooperate more closely in the development of a unified data and notification system (such as a single manifest system) and in the exchange of shipment-related information, including, without limitation, shipments made by or under the direction of the United States Department of Energy or Defense.

8. *Emergency Response*

Emergency response should continue to be the primary responsibility of state and local governments. However, several steps can be taken by all levels of government and by industry to improve their emergency response capabilities. First, federal, state and local governments should develop one centralized emergency response authority within each of their jurisdictions to enable better inter-jurisdictional communications when an accident does occur. In particular, the federal emergency response authority should provide accurate timely information to state and local governments concerning all hazardous materials shipments including, without limitation, those made by or under the direction of the United States Department of Energy and Defense.

Second, the federal government should develop an outreach program to explain its regulations to state and local officials and should set minimum training and education standards so that shippers and emergency personnel in all jurisdictions will have a common understanding of accident prevention and mitigation.

Third, the federal government should provide guidelines for planning for and responding to emergencies and should furnish technical information in an emergency situation.

Fourth, the federal government should evaluate and certify training programs used by regional, state and local emergency personnel.

And fifth, industry should be required to participate in education and training efforts, and in accident prevention and response activities. As an inducement to industry participation in emergency response efforts, the federal government should encourage its state and local counterparts to adopt good samaritan legislation limiting industry liability if they do respond to an accident.

State and local governments should continue to coordinate and manage emergency response activities, and should participate, with the assistance of industry and the federal government, in education and training efforts.

9. *Enforcement*

The federal government should continue to be responsible for the enforcement of federal manufacturing, testing, repair, and reconditioning standards for hazardous materials containers and packaging. The federal government should develop similar requirements and should enforce such requirements for shipments made by or under the direction of the United States Departments of Energy or Defense which are currently unregulated. Additionally, the federal government should continue to enforce standards for labeling, marking, placarding, designating and classifying hazardous materials. States and localities should have concurrent jurisdiction over vehicle operating requirements and standards; that is, they should be allowed to adopt and enforce these standards and requirements, including but not limited to imposition of fines or civil penalties for infractions of these federal requirements.

To assist states and local government enforcement efforts, Motor Carrier Safety Assistance Program

(MCSAP) grants from the Highway Trust Funds should be increased and made available to those states and local governments which voluntarily agree not to levy a fee or tax on the transportation of hazardous materials. Additionally, the State Hazardous Material Enforcement Development (SHMED) program, which was created by the federal government to help states establish hazardous materials transportation inspection and enforcement programs, should be retained and adequately funded.

10. Financing

The federal government should establish a national trust fund based upon a registration fee which will generate enough revenues to pay for state and local hazardous materials-related needs (e.g., emergency response enforcement, planning, training, equipment and personnel). Funds should be distributed to state and local governments based on a formula which takes into account the amount of hazardous materials shipments passing through each jurisdiction annually, and in proportion to the amount of risk that is caused by such shipments, and should include all shipments made by or under the direction of the United States Department of Energy or Defense.

In order to be eligible for funds from the trust fund, a state should demonstrate that: it has initiated a program to develop a state-wide emergency response plan, designated a lead agency for administering emergency response activities, agreed to assist local governments in emergency planning and response, agreed to pass a portion of its hazardous materials entitlement to local governments for planning and emergency response purposes, and established an emergency response coordinating council consisting of state and local government and industry representatives.

Any state or locality which chooses to accept funds from the hazardous materials trust fund would be precluded from levying its own fees on the transportation of hazardous materials. A locality, which can demonstrate that it has a unique hazardous materials problem or need which is not being satisfied by its federal trust fund suballocation, should be allowed to levy its own fees on the transportation of hazardous materials.

11. Insurance

The federal government should set minimum insurance requirements for all large quantity or Type B (health hazard) radioactive materials shipments and shipments made by or under the direction of the United States Departments of Energy or Defense, to ensure that shippers are financially able to bear emergency response and cleanup expenses.

12. Federal Administration of Hazardous Materials Programs

Congress should adequately fund the Materials Transportation Bureau and other related hazardous materials offices within DOT so that they can more effectively enforce the Hazardous Materials Transportation Act, more expeditiously process inconsistency petitions and promulgate regulations, more consistently collect and disseminate data and more effectively coordinate federal hazardous materials.

5.03 MODAL POLICIES

A. Public Transportation

1. General

The National League of Cities believes that public transportation is an essential public service whose primary objective is to provide mobility for all people, including the disabled, elderly and economically disadvantaged, in all places and not simply for those who can afford to pay for the service. Further, NLC believes that public transportation can contribute to the viability of the nation's cities by helping to reduce congestion, stimulate economic development and create employment opportunities; therefore, its provision is in the national interest. Since public transportation will never be self-supporting, it should continue to be subsidized by a partnership of federal, state and local governments. Concurrently, public transportation authorities, with the assistance and cooperation of transit labor unions, should continue their efforts to reduce operating costs and increase transit revenues.

2. Farebox Policies

Transit authorities should implement fare policies which reflect time-of-day and distance traveled. They should not establish across-the-board fare increases on all users since such increases do not serve the public interest. However, fare increases alone will not generate enough revenues to satisfy existing and future transit needs, and additional subsidies will continue to be needed.

3. Transit Productivity

Local transit authorities should continue their efforts to improve productivity through better management, increased use of part-time labor, routing maintenance programs and similar strategies. Maintenance and productivity indices should be incorporated into the federal allocation formula, and there should be incentives in the matching ratio to encourage productivity improvements and maintenance of existing transit facilities. However, productivity improvements alone will not mitigate the problems of rising transit costs and inadequate transit revenues.

4. Role of the Private Sector

The private sector should be encouraged to participate in the provision of transit and para-transit service where that service is complimentary to the existing public transportation service and where there can be a partnership of public and private providers. Decisions about the terms and conditions of private sector participation in transit, including the decisions to subcontract with

National Governors' Association

John H. Sununu
Governor of New Hampshire
Chairman

Raymond C. Scheppach
Executive Director

Statement of

RAYMOND C. SCHEPPACH

before the

SUBCOMMITTEE ON SURFACE TRANSPORTATION

of the

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

U.S. HOUSE OF REPRESENTATIVES

on

TRANSPORTATION OF HAZARDOUS MATERIALS

May 25, 1988

HALL OF THE STATES · 444 North Capitol Street · Washington, D.C. 20001-1572 · (202) 624-5300

Good morning, Mr. Chairman. I appreciate the invitation to come before you today to discuss state concerns related to hazardous materials transportation. My statement will present a policy overview of the issues, while Virginia Transportation Secretary Vivian Watts will provide you with an individual state's response to developing and managing an effective hazardous materials transportation program.

The safe transport of hazardous materials is a matter of grave concern to all of us. Accidents on the nation's highway system involving hazardous materials not only pose extremely serious risks to public health and the environment, they also can snarl traffic and hamper the efficient movement of people, goods, and services.

Recognizing the risks that hazardous materials can pose, we also must realize the important contributions that they make to our nation's economy and our continued high standard of living. Any attempt to address problems in this area should balance a commitment to public safety with continued support for economic growth. For some time, NGA has held that states and the federal government should jointly examine how federal, state, and local governments, along with the private sector, can act cooperatively in the regulation and management of hazardous materials.

Sound policies to deal with transportation-related concerns cannot be considered in a vacuum. There are many important and interrelated considerations involved with regulation, routing, training, enforcement, emergency planning and response, incident management, liability, and disposal. It would be ambitious, but useful, for Congress to undertake a comprehensive assessment of the range of issues involving hazardous materials as you attempt to resolve program and policy concerns in this one important program area: transportation. Such a broad undertaking would supplement the excellent work of the Congressional Office of Technology Assessment in its comprehensive study on the transportation of hazardous materials.

Woven throughout these considerations just listed are three crosscutting issues that must be addressed: coordination of effort, funding needs, and training needs. Almost any specific problem we could discuss here today -- from routing to research -- can be characterized by these three issues.

Coordination of Effort. Government is not very well organized to deal with the interrelationships, and as a consequence all participants in the process are faced with a matrix of overlapping jurisdictions, institutional complexity, and program-specific laws and regulations. These have developed as responsible people in committees, agencies, and governing bodies have addressed component parts, trying to do what they could to manage their part of the problem.

It is important to note that while much of the regulatory authority for control of hazardous materials movement resides with the federal government, states are responsible for ensuring safe, efficient travel on the nation's highways. Decisions to select routes for the transportation of hazardous materials must involve consultation with the states, which are in the best position to designate routes.

Secretary Vivian Watts' testimony illustrates some of the problems and concerns faced at the state level as they manage interrelated program and operational issues. Simplification of federal administrative regulations and program roles would help, but recognition of the need for coordination among the various policy objectives and the existing support structures is also essential.

Institutional frameworks are already in place in most states that potentially can accommodate any new, more coordinated national policy objectives.

Funding Needs. As for financing, we can all agree it is a pressing problem facing government at every turn. Achieving effective enforcement, preparing for adequate response, and collecting sufficient data all require money in a time when resources are thinly stretched. NGA calls for the maximum use of available resources and the development of an assured, stable source of revenue to finance hazardous materials program activities. Examination of options could include a user-financed fund to cover, at minimum, the costs of administration, training, enforcement, and emergency response. Certainly states are experimenting with various types of financing mechanisms in these areas. We hope that such experimentation would not be constrained or forestalled without a fully adequate alternative source of funding in place.

Training Needs. The third issue is training. Education and training programs are needed at every juncture, whether it be to train the worker who loads the shipment, driver who transports materials, the official who inspects the vehicle, the responder who handles an incident, or the analyst who evaluates accident data.

Training and retraining are ongoing necessities, particularly in communities that rely heavily on volunteers. Therefore, an adequate and consistent commitment from all levels of government and from the private sector is required to address the coordination of training programs. Many states have launched their own training initiatives. For example, in the area of emergency response, a number of state training institutes rival federal efforts. Such state level initiatives must be recognized as essential, viable contributions and should be integrated into the development of any national training strategy.

Having now outlined the broad policy themes, I will move to presenting concerns in specific subject areas.

Emergency Preparedness - Planning and Response

States must assume the lead role in developing effective state and local government response plans and capabilities. Federal programs -- whether dealing with response training for hazardous materials incidents or cleanup of hazardous waste sites -- should recognize and rely on established state structures. While all states have established state emergency response commissions and local emergency planning committees under the Emergency Planning and Community Right to know Act (Superfund's Title III), there is no federal support for the significant planning requirements for states under that statute. The lack of federal funding is critical for states trying to help local governments prepare emergency response plans and finance training and equipment.

Emergency training assistance funding to states and local governments through the Federal Emergency Management Agency is minimal and restrictive. Funds for this $5 million program were not requested for fiscal 1989. Comprehensive training programs for emergency response personnel should be geographically accessible and should include first responders, technical response, and incident managers. Additional resources and technical support would contribute to improved response capability and to personnel safety and health. Federal support to state and local governments through the Department of Transportation also should be expanded.

Enforcement

Strengthened support for ensuring compliance with hazardous materials transportation regulations and other motor carrier requirements is essential to promoting safe operations on the nation's highways. Governors have called for full state participation and full funding of the Motor Carrier Safety Assistance Program (MCSAP), which has substantially upgraded the number and quality of inspections, effectively establishing a national minimum level of enforcement. Additional federal financial and technical support would allow states to improve the training of state and local enforcement personnel to ensure compliance with hazardous materials regulatory requirements.

In cooperation with the U.S. Department of Transportation, NGA is developing a Hazardous Materials Transportation Information Guide for Governors. The guide will sort out federal, state, and local responsibilities in hazardous materials enforcement; delineate existing state programs and needs; and develop model state legislation that will more effectively enable the states to enforce hazardous materials regulations.

Driver qualifications and licensing for commercial drivers and hazardous materials transporters is an essential component of national and state safety strategies. The states are coordinating with each other and the Federal Highway Administration to ensure compliance with the requirements of the commercial driver license program.

Data Collection

A critical ingredient for the success of the commercial driver license program will be the management information system that will enable sharing of a nationwide data base on commercial drivers. A similar need exists for integrated information on vehicle defects and other safety deficiencies; it will be compiled on a nationwide basis from state inspections and maintained in SAFETYNET, a shared federal/state management information system. Such systems must be implemented expeditiously.

Evaluation and coordination of the amount and type of information collected is essential. Any new data requirements should supplement the substantial amount of information already being collected for multiple purposes, such as Title III.

Better and more efficient ways of collecting comparable data must be found. On a small scale, NGA is operating a multistate regional demonstration program to test acceptance and use of a standard accident reporting form that may prove very effective in systematically collecting data on truck accidents. There is a national need for adequate and accurate data for problem identification and evaluation, but it is also very important for the states as they assess program effectiveness.

Cooperative Research Efforts

As we look to the future, our knowledge base, as well as the programs themselves, can be improved not only through the collection of existing information, but also through innovations and technological improvements and efficiencies yet to be realized. Truck technology is changing, roadway/vehicle compatibility issues are being explored, and response techniques and equipment are becoming more sophisticated. While we cannot expect that technology will provide a complete solution to the hazardous materials transportation problem, we cannot ignore the value of investing in research and analysis. The states and the federal government can guide technological change toward improving safety through participation in research and development initiatives.

In conclusion, the challenge we face in this area is perhaps unequaled in scope and complexity. It will take the steadfast commitment of both government and industry alike to resolve this modern dilemma.

STATEMENT OF THE NATIONAL ASSOCIATION OF TOWNS AND TOWNSHIPS (NATaT)

BEFORE THE HOUSE SUBCOMMITTEE ON SURFACE TRANSPORTATION COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

REGARDING THE TRANSPORTATION OF HAZARDOUS MATERIAL
MAY 25, 1988

Mr. Chairman, and distinguished members of this Committee, my name is Jeffrey Schiff. I am the Executive Director of the National Association of Towns and Townships (NATaT), a national organization representing small town America. Our 13,000 members are mostly small and rural towns, townships, and small cities from across the United States.

We appreciate this opportunity to present the views of grassroots government on an issue of vital concern to us -- the transportation of hazardous materials.

THE LOCAL SITUATION

Mr. Chairman, as a beginning point, Congress needs to recognize that the majority of the 39,000 general purpose local governments in this country are very small -- seventy-two percent of them are under 3,000 people, and fully half have populations below 1,000.

Almost all of these small governments are served by volunteer fire departments. For the most part, these volunteers support their departments through a variety of special, but small fundraising efforts; many do not have sophisticated equipment, most lack computers, and in fact many have a difficult time keeping basic fire-fighting equipment complete and up-to-date. The purchase of additional, special equipment required to respond to chemical spills or major hazardous materials accidents is clearly well beyond their means. Yet it is these very same volunteer fire and rescue personnel who will most likely be the first responders in the event of an accident.

This situation should concern Congress because the national transportation system of today has evolved in such a way that vehicles carrying hazardous materials move around the nation's large populations centers -- not through them. **As national leaders, Congress must recognize that the most probable areas in which accidents will occur are presently the least prepared.** In fact, it is entirely possible that a truck carrying hazardous materials could travel from the eastern seaboard to the Pacific coast and drive through no more than three major cities.

For the most part, the small communities along such a route are served by volunteer fire and rescue personnel, most of whom are ill-equipped and under-trained for this major responsibility. **Consequently, it is absolutely imperative that federal policy ensure the preparation of our nation's fire and rescue volunteers for this role.** To do otherwise is not only poor public policy, but more importantly, threatens the health of our communities and the people who have entrusted them with their care.

Historically, NATaT has been very active in the HAZMAT policy area. We are very concerned about the risk which the transportation of hazardous materials poses for the nation's smaller communities, and consequently, our staff has worked closely with the U.S. Office of Technology Assessment (OTA) in the completion of its July, 1986 report, "Transportation of Hazardous Materials," which addressed the issues confronting smaller communities. Great effort was made at the time to incorporate small community representatives in the advisory group for the study, which included two representatives from the membership of NATaT. As a result, we believe that the report addressed fairly extensively the issues that confront the nation's smaller, more rural communities as they tackle the job of dealing with hazardous materials.

The OTA report documents certain problems facing these communities which need to be addressed in any federal HAZMAT legislation. Work by NATaT in this area for over five years through workshops, surveys, and written information supports fully the conclusions reached by the OTA. Let me briefly summarize the report's findings:

1. Most important, small community volunteer fire departments are not trained to respond in the event of a hazardous materials accident. **Our fire and safety personnel need basic first-response training.** The problem is complicated further, because even in those instances where communities have made a commitment to secure training as part of a hazardous materials emergency response program, the quality of the training may be called into question because no national training standards exist.

To some degree, this problem will be rectified when the Occupational Safety and Health Administration (OSHA) issues its final regulations on Hazardous Waste Operations and Emergency Response this summer. We are anxiously awaiting these rules and hope that they establish realistic and appropriately scaled minimum standards. However, the OSHA requirements will address only one part of the training problem; there continues to be a major concern about how local emergency and safety volunteers are to select those programs that provide the best training and which meet the national standards. A training certification program could address this concern.

2. **Communities that commit to developing the capacity to respond to accidents involving hazardous materials are unlikely to have the financial resources needed to secure the proper training, equipment, and vehicles.** Repeatedly in the course of conducting workshops at national association conferences, the same story has been often heard, where communities have joined together to develop hazardous materials response capability but had succeeded in raising only a portion of the necessary funds. For rural communities in particular, the resource base does not necessarily exist to raise adequate funds, no matter how many raffles, bake sales, and other non-traditional fund-raising methods are used.

3. Rural communities need better information made available to them on the movement of hazardous materials in their region. There are 39,000 general purpose local governments in the United States, and clearly not all of these governments need to develop sophisticated response teams. **For many small com-**

munities, first responder training may well be all that is required, but communities need information on the flow of hazardous materials traffic to help them gauge the relative risk posed to their community.

4. Communities complain that insufficient information accompanies the vehicle traveling through their towns and townships. If there is no information accompanying a shipment of potentially hazardous chemicals, communities may become defensive in their approach to the problem and perhaps compound it by enacting cumbersome, unworkable ordinances. **More consistent and uniform enforcement of regulations governing driver and vehicle safety is needed to assist communities in protecting their jurisdictions.** We are pleased to see that the proposed regulations implementing the commercial motor vehicles safety law has included the requirement that drivers for carriers of hazardous materials must not only undergo testing of their driving proficiency, but will also be tested on their knowledge of how to handle dangerous materials and what to do in the event of an accident. We applaud FHwA for its recognition of this much-needed requirement.

NATaT RECOMMENDATIONS

The problems facing smaller communities nationwide could be remedied, in part, if action were taken at the federal level to strengthen the current system for regulating hazardous materials traffic.

First, NATaT urges that the U.S. Department of Transportation (DOT) be required **to register shippers and carriers of hazardous materials.** DOT already has the authority to establish a registration program but has not done so to date. We believe that such a program would help better define the industrial universe involved in transporting hazardous materials. We further recommend that DOT **assess a registration fee** which should be earmarked to finance a national emergency response fund.

Second, state and local governments do not have the resources to equip and train local emergency personnel. Small governments, in particular, need financial and technical assistance in order to fulfill their obligations in implementing federal regulations. **Consequently, we continue to stress the need for a**

national emergency response fund that would guarantee the distribution of training and equipment monies on a regional basis, with states to assist localities in establishing adequate emergency response capacity.

This fund would not have any effect on the federal budget process if it were financed by the registration program already mentioned in our first recommendation. We believe that industry has a responsibility to help finance the preparation of the nation's first responders, and we urge Congress to give serious consideration to this recommendation. For small communities, in particular, the mandating of regulations that they must follow without providing financial and technical assistance is tantamount to doing nothing.

Third, our membership **advocates a set of uniform national standards, issued by the U.S. Department of Transportation,** which would govern hazardous materials transport. Safety regulations, licensing requirements and fee schedules should not change as carriers transport hazardous materials from one jurisdiction to another. Small communities agree that certain activities, such as imposing fees or prohibiting traffic completely, should not be allowed at the local level so as not to unduly impede traffic and thereby, unnecessarily threaten citizen safety. From a small community perspective, the importance of promoting uniform regulations is founded in a belief that such regulation would provide a mandatory framework that all localities must follow **with certain important exceptions, including circumstances in which localities could adopt routing restrictions or curfews.** However, in exchange for the preemption of local authority to assess such fees, industry bears a responsibility to finance a local emergency response training fund. Local governments should not be expected to give up their only authority to protect public safety -- routing bans and additional safety regulations -- when neither the federal government nor industry provides the necessary financial and technical assistance to prepare local volunteer emergency personnel as first responders.

Fourth, **NATaT advocates the need for certification procedures for hazardous materials training programs to assist localities in evaluating programs before committing to them.** In general, training programs are not offered in small towns and remote areas; volunteers must take time off from their full-time jobs and travel great distances to attend training programs. The federal government needs to understand this problem and to work with local officials to devise a uniform, comprehensive, and accessible training program so that local officials do not waste limited resources attending seminars which do not provide adequate and appropriately scaled training.

Fifth, **small and rural communities need better information on the flow of hazardous materials** in order to assess the extent of the threat posed to their communities. This information will assist local officials in developing an adequate emergency response plan as required under the "Superfund Amendments and Reauthorization Act of 1986" (SARA). We recommend that Congress call for such a study in any congressionally enacted HAZMAT package.

Sixth, for the most part small and rural community emergency personnel are not fully prepared to respond to hazardous materials accidents. Dealing with chemicals is unlike dealing with a fire. No matter how good a fire department may be performing its normal functions, it may be totally unequipped to deal with hazardous materials. Yet, nationally, we have no information on the state of local capacity and what is necessary to strengthen it. **NATaT advocates the collection of data on local government capacity, particularly that of smaller goverments, to meet basic federal emergency response requirements.**

COMMENTS ON PENDING LEGISLATION

There are a number of HAZMAT proposals now pending before Congress. In our view, none of these proposals provides a comprehensive solution to the problems small communities face in protecting themselves in the event of a HAZMAT disaster; consequently, none of these proposals meet our policy criteria for endorsement.

"The Hazardous Materials Transportation Safety Amendments of 1987" (H.R. 2650), introduced by Representative Cardis Collins, provides the most comprehensive solution and perhaps offers the best protection for smaller communities. H.R.2650 provides support for local emergency response training and equipment; however it supports this funding with an additional one-tenth of one cent tax on motor fuels. **NATaT traditionally opposes any use of the**

motor fuels tax for purposes other than those currently authorized by the Highway Trust Fund.

The Collins proposal has many good features which we support. It requires national routing, yet ensures that local entities are trained to meet the responsibility as first responders. Local authority to assess fees and issue licenses is preempted **when and only when** local officials accept the training assistance. The proposal also mandates national registration of shippers and carriers.

Representative Collins' proposal further establishes a 24-hour emergency "hotline" to provide information to local governments in the event of an accident. It is our hope that this "hotline" would be more responsive and provide more information than the CHEMTREC system. While CHEMTREC has been an important advancement, we feel that the system could be improved upon. In addition, CHEMTREC was set up by industry, and industry must protect trade secrets which creates some barriers. Most importantly, since CHEMTREC has been established voluntarily, there is no statutory requirement that the chemical industry maintain the system. Consequently, inclusion of a statutory base for such an information system ensures its continuation.

The Collins proposal also requires that federal and state government provide technical assistance to local communities. For smaller communities, this is an extremely important provision, because it assures that these grassroots governments have access to expertise that is unavailable within their own communities. Finally, H.R. 2650 calls for the federal government to study the flow of hazardous materials so that, as regulators, all levels of government can understand the problem. These all are crucial features of any national HAZMAT measure.

Mr. Chairman, NATaT could endorse this proposal were it not for the fact that it relies on the motor fuels tax to establish the local emergency response fund. **We have long held that industry should help to train local government for its role as first responder. Therefore we support the mandatory assessment of fees for registration and permitting of shippers and carriers, and we recommend that these fees be used to support a local government training and equipment fund.** Consequently, we urge that this committee consider amending Representative Collins' proposal to require the establishment of industry fees for training programs in lieu of additional taxes on motor fuels.

We particularly oppose the Administration's proposal. This legislation would create a national routing process that (1) ignores the fact that carriers will be routed into low-density population areas -- communities that are the least prepared to deal with an emergency -- and then offers no support to ensure that these small communities receive adequate training; and (2) establishes a negotiating and appeals process only for state governments **while purposely leaving local governments out of the routing decision-making process.** This is totally unacceptable.

Representative Gallo's proposal, "The Hazardous Materials Transportation Information Act of l988" (H.R. 4153) is an important step in the right direction. This proposal requires a region-by-region study of the flow of hazardous materials, not only on the nation's highways, but also on the railways and waterways. **We endorse this proposal, but it must be made clear that this legislation is only a part of the legislative solution.** Congressional passage of this measure without the other major components -- in particular, improved collection of data on local resources, first responder training and equipment assistance for local emergency personnel, certification of training programs, and a national registration/permitting system for shippers and carriers -- continues to place our nation's smaller communities at risk.

While we recognize the need to develop better information on the flow of hazardous materials, **there continues to be an even greater need for more information on the needs of local communities serving as first responders.** Few federal agencies collect information on the nation's smaller communities, and when they do, this information is often unaccessible. We believe that the federal government should know what resources small community officials can bring to bear on the problems of hazardous materials transportation, evaluate these resources, and augment them where needed.

With an accurate information system, proper planning, and financial and technical assistance, federal and state officials can ensure that all of the nation's first responders receive level-one training, and that a timely and responsive

HAZMAT team is available for small communities to contain and deal with accidents.

The new Title III Local and State Planning mechanisms contained in SARA can help federal and state governments make an accurate assessment of local needs. We believe that H.R. 4153 is an appropriate vehicle to mandate a needs assessment study on local preparedness using these Title III planning bodies.

CONCLUSION

In summary, NATaT's general position regarding federal mandates and other policy requirements is that small communities are different and have different needs and capacities than do larger municipalities. Federal policy should be flexible enough to recognize this great diversity, and if flexibile standards are not feasible, the national government should provide financial resources to enable small town America to comply.

It is our view that the mandates problem is not one of small localities being incompetent to participate in national policy initiatives, but rather that those initiatives, for whatever reason, are attempting to apply an inflexible standard of performance to a highly-diverse network of intergovernmental actors. Small towns have played, and continue to play, an important role as implementors of national policy. In these increasingly complex times, objectives for performance by America's small towns should be grounded in a ***realistic view of what is possible.*** To do otherwise is the recipe for ineffecive policy.

We appreciate this opportunity to share our views with the Committee and look forward to the possibility that positive action will be taken during this session of Congress to make certain improvements in the current system of transporting hazardous materials. We are grateful to the U. S. Office of Technology Assessment for providing a thorough and exhaustive study of the issues which need to be addressed. We hope that the study can be the impetus for action aimed at correcting the problems and providing for the safety of the nation's communities.

Finally, Mr. Chairman, we express our appreciation for the leadership you have taken in holding this hearing today, and we stand ready to work with you, and

Finally, Mr. Chairman, we express our appreciation for the leadership you have taken in holding this hearing today, and we stand ready to work with you, and the Members of this Committee, as you move forward on this crucial issue of concorn to all of the nation's communities -- small and large alike.

Thank you.

Mr. ANDERSON. Our next witnesses are Ms. Lana Batts, vice president for policy of the American Trucking Associations, and Cliff Harvison, president, National Tank Truck Carriers, Inc.

Ms. Batts, I have here testimony from Tom Donohue. I understand you are giving that. Is that your testimony?

Ms. BATTS. That is correct, and if you would, please use his testimony and enter it into the record, and I will just give a very short——

Mr. ANDERSON. So we do have the testimony, then, of yours, Ms. Batts. It will be Tom Donohue's, and we have testimony by Clifford Harvison. We will make this a matter of the record.

Ms. BATTS. OK. Thank you very much, Mr. Chairman.

Mr. ANDERSON. The floor is yours.

TESTIMONY OF LANA BATTS, VICE PRESIDENT-POLICY, AMERICAN TRUCKING ASSOCIATIONS; AND CLIFFORD HARVISON, PRESIDENT, NATIONAL TANK TRUCK CARRIERS, INC.

Ms. BATTS. It is a pleasure to be here. The American Trucking Associations welcome the opportunity to testify on the subject of hazardous materials transportation because it is a subject of vital importance to all motor carriers which transport hazardous materials, whether they are large carriers or small carriers, whether they transport it in tank trucks or transport it in drums, cartons, cylinders, portable tanks, small packages, and whether they are for hire or private.

As you know, it is hard to get this industry united on anything, but on the question of hazardous materials we are united in the need for a stronger Federal role in providing the leadership necessary for the safe transportation of hazardous materials. Each day the trucking industry moves over 250,000 shipments of hazardous materials a day. These shipments include everything from soap and cosmetics and gasoline, and to the more exotic ones with names you can't pronounce, and to poisons which are toxic by inhalation. I think it is important to note that these 250,000 shipments a day are basically transported without incident. Less than one-half of one percent of our total shipments involve some kind of an incident.

However, the current regulations which we operate under are now 14 years old, and it is time that they be reevaluated. Although they have served the American public and the trucking industry, they must be strengthened in order to ensure safer transportation of hazardous materials. Basically, we would like to see the legislation address five areas. National guidelines for routing, Federal standards for equipment and operation, a uniform incident reporting, limited prenotification, and national safety registration. If I may just take a minute to address each of those.

Under the national guidelines for routings, we believe that the Federal Government must set guidelines for local and State governments to follow in adopting the safest routes for the transportation of hazardous materials. We are not calling for Federal routing; we are calling for Federal guidelines of routing, because we believe the hodgepodge of routing regulations that we see today is making it more and more difficult to comply and as a result we are jeopardizing safety.

We also seek Federal standards for equipment and operations. Only the Federal Government should have the authority to establish regulatory requirements governing areas such as containers and tank construction, vehicle placarding, package marking and labeling, shipping paper requirements, and hazardous materials designation and definition. If each State decided what is a hazardous material, there is no way we could ever comply and there is no way that the highways would be safe.

We are also seeking some type of uniform incident reporting. Again, we believe the Federal Government should have the sole authority to require reports on hazardous materials incidents. This would prevent duplication and confusing reporting requirements. The Federal law should preempt State and local requirements, except where immediate notice is required for emergency response purposes.

In addition, we are seeking some type of limited prenotification. We believe that the prenotification of hazardous materials moving and the tracking of such movements is complex, cumbersome, costly, and in the long run offers very little in the way to ensure safety. The authority to require prenotification should be limited to the Federal Government, and to such materials designated by the Department of Transportation as extremely hazardous—for example, spent nuclear fuels and high-level radioactive waste shipments.

Finally, we want to see some kind of a national safety registration program. In order to promote the safety of hazardous materials transportation and the compliance with those requirements, DOT should establish a registration program which includes all carriers, all shippers, and all manufacturers of containers in which hazardous materials are used. Such a program would require each registrant to demonstrate safety fitness, including minimum levels of financial responsibility, as a condition of registration. We believe that State and local governments should not be allowed to duplicate these registration fees.

Mr. Chairman, last summer we testified before the Subcommittee on Transportation, Tourism and Hazardous Materials and urged passage of a bill that contained these points, which are very similar to what is now in the Department of Transportation's bill, H.R. 4069. We commend the DOT for its proposal to improve safe transportation of hazardous materials, and we support H.R. 4069 with modification, for the following reasons.

Basically, the DOT bill establishes procedures for determining routing issues and, more importantly, for settling the disputes which arise from the routing questions we currently face. In addition, it provides that only the Federal Government can set the technical standards governing the transportation of hazardous materials. It also grants the sole authority to the Secretary to require written notification of hazardous materials incidents. It requires permits for carriers who transport certain high-risk hazardous materials; and, finally, it promotes the kind of regulatory uniformity, by strengthening the Federal preemption process, which is necessary if carriers are going to comply.

The only shortcoming in the bill, and which we think should be included, is that it must address the proliferation of registration fees that we now see happening on the State and local level. I urge you to expedite its passage. With enactment of this legislation, the safety and efficiency of hazardous materials transportation can be improved, and we can stop the proliferation of unnecessary and restrictive laws which do nothing for the safety, and seriously burden interstate commerce, and in essence only respond to the latest newspaper headline.

In closing, I want to reemphasize ATA's continued commitment to the safe transportation of hazardous materials on our Nation's highways. We offer our support for passage of the reauthorization of the Hazardous Materials Transportation Act in this session of Congress, and I would be happy to answer any questions that you may have.

Mr. ANDERSON. We will hold the questions until after the panel has completed.

Mr. Clifford Harvison?

Mr. HARVISON. Thank you, Mr. Chairman. I shall attempt to be mercifully brief.

First of all, National Tank Truck Carriers is a trade association. We are an affiliate of the American Trucking Associations, and we represent solely the tank truck sector of the trucking industry. I would estimate, that of the total amount products our carriers haul, about 70 percent of the trips are laden with hazardous materials.

We are here today in support of H.R. 4069. We are here supporting that legislation because we believe it addresses four concerns that are rather significant to my members.

Those concerns are, first of all, it would establish DOT as the sole regulatory authority as far as the enactment and promulgation of technical hazardous materials regulations. By "technical regulations" I mean rules that guide industry in terms of container requirements, manufacturing standards, and other specifications.

The second thing it does is, it addresses—and, we believe, properly—the very, very contentious and politically sensitive area of routing. The bill carves out positions for both the Federal Government, in terms of the issuance of guidelines and in mediating disputes, irreconcilable disputes between two State entities, while leaving the issue of local routing to a lead State agency, and that is where we believe it belongs.

The third thing that it addresses, as far as we are concerned, and again of great interest, is the aspect of registration. It would begin a registration program. I would like to echo the sentiments of Lana Batts and ATA regarding the necessity of a carrier registration program. We do not believe it has to be totally inclusive, in that admittedly there are some carriers that are minimally involved in the transportation of hazardous materials, and to impose an overwhelming administrative burden on DOT to capture all of those carriers might be asking too much.

I have taken the liberty of appending to my testimony today a concept regarding the mandated exchange of insurance information in other words, where the carrier and shipper would be required to exchange information with shippers documenting compliance with the insurance and evidentiary financial responsibility segments of the Motor Carrier Act. This may be one way of meeting the objectives of a carrier registration program without the administrative burden. All of these programs, including my own particular concept with regard to the use of a mandatory insurance exchange, have their limitations.

Last there is the question, and this bill addresses it, of emergency response and, most specifically, who pays. As has been presented in testimony by the National League of Cities in the panel before us, and in fact even the Government witnesses this morning note, the question again is politically sensitive. There is no easy or inexpensive answer.

My association, and indeed I know this to be true of the American Trucking Associations, supports a hazardous materials trust fund to be contributed to by carriers, shippers, and container manufacturers. It would be federally administered, however, kicking in only at such time as there would be preemption of State and local fees assessed against vehicles solely because they are laden with hazardous materials.

Mr. Chairman, that completes the oral summary in my testimony, and I ask that the full statement be entered in the record. Thank you.

Mr. ANDERSON. Well, thank you. Thank you, Cliff.

My first question is for Ms. Batts. Ms. Batts, the Department of Transportation has issued a final rule rescinding the commercial zone safety exemption. Now in light of that action, is it necessary or desirable for Congress to legislate on this issue?

Ms. BATTS. Well, Mr. Chairman, as we have discussed before, we have to get rid of the commercial zones, and I think that DOT attempted to do that. Unfortunately, the regulations they issued and were printed in the Federal Register on Tuesday are extremely confusing and very cumbersome. I have been reading regulations for a long time, and I admit I had to read those three or four times just to figure out what they were trying to do. It's kind of like trying to describe a doughnut, but all you can do is to describe the hole.

We think there has to be legislation. That Congress needs to say, "We are not going to allow commercial zone exemptions for safety." Pure and simple, cut them out, and there is no need for all the regulations that DOT is issuing.

Take a look at the Washington, DC, area, which has three jurisdictions. Maryland accepted the exemption, but then put in comparable language so that they have some kind of rules. Virginia, on the other hand, decided that they would not accept the Federal exemption, and they put in their own. We don't know what the District is going to do. Who knows what is happening within this metropolitan area?

We urge Congress to abolish the commercial zone, that is, there is no longer an exempt commercial zone when it comes to Federal safety regulations. We can't afford the kind of dumping ground that our major metropolitan areas have become.

I, therefore would urge you to pass a bill so that there is no confusion. In my experience, the simpler the rule, the regulation or the law, the easier it is to comply with and the easier it is to enforce. I am afraid what the DOT has done is not going to make it easy to comply with, and is certainly going to make it very difficult to enforce.

Mr. ANDERSON. Ms. Batts, in your view, what type of funding mechanism should be established for training emergency response personnel in the public sector?

Ms. BATTS. As I and Mr. Harvison indicated, the motor carrier industry has recommended some kind of a registration fee paid by the carriers—and by that we mean all carriers, motor carriers, railroads, airlines, anyone who is hauling hazardous materials—as well as the shippers of those hazardous materials and the container manufacturers for those hazardous materials. While we would like to see some kind of a needs study to determine what the cost is going to be, there should be some kind of a trust fund established that is funded by the transporters, the shippers, and the container manufacturers of those hazardous materials. We would like to work with this committee and the DOT to write the rules in order to do that.

Mr. ANDERSON. What types of emergency response training are now provided by the trucking industry for operators of trucks transporting hazardous materials?

Ms. BATTS. Training begins with the commercial driver's license which is one of the most exciting things that has come along in a long time. Within the commercial driver's license we urge that there be an endorsement for those drivers of hazardous materials, requiring some minimum Federal standards of what those people have to know.

Currently the DOT does have some rules. We have petitioned DOT to ask them to strengthen those rules. That petition is still waiting. Many carriers have very, very strong safety programs. Unfortunately, others do not. That is why we think we need some Federal guidelines in this area, stronger standards, and an endorsement mechanism within the commercial driver's license.

Mr. ANDERSON. Can you estimate the cost of such training?

Ms. BATTS. The cost of such training is going to be very high, but from the standpoint of the safety of the traveling public, it is a cost that we will be willing to bear, once we get the standards on which we are working with the DOT. I think they can balance the costs with the effectiveness, something such as like Secretary Watts was describing; we believe it should include law enforcement personnel within that training.

Mr. ANDERSON. What is the present cost that is currently provided by the trucking——

Ms. BATTS. I'm sorry. I can't answer that. I would try to get that information. I think that would be very difficult. I will tell you, Mr. Chairman, it's a lot but it's not enough.

Mr. ANDERSON. Now on page 10 of your statement, Ms. Batts, you say that there is no practical and cost-effective way of providing prenotification of hazardous materials shipments. Does that statement preclude the use of general notifications requirements, such as notifying localities that shipments will be made through their area on a routine basis?

Ms. BATTS. If the trucking industry were routine, I probably wouldn't have a job. As you know and as anyone who has been around it knows, there is no such thing as a routine shipment. There are some regular shipments of hazardous materials, but we are talking about 250,000 shipments a day going to various localities and communities. Basically, there are about 60,000 communities, localities, townships, and villages that have the potential of issuing some kind of a prenotification requirement.

Sometimes we know when we are going to pick up a load that it is going to be hazardous materials; sometimes we don't. Let me give you the example of United Parcel Service. When they go out on their routes, they have no idea whether they are going to pick up a hazardous material or not. That is why they train their drivers so that they all know what to expect. How do they prenotifying a locality, if the trucking company does not know when it goes to pick up the shipment that it is hazardous materials in the first place?

Secondly, I don't know where everybody is going to store all that information. I mean, if we transport 250,000 shipments a day, what are the localities going to do with all that information? The hazardous materials are moving through the localities by and large safely now. I mean, the incidence is less than one-half of 1 percent of those 250,000 shipments a day.

Mr. ANDERSON. Mr. Harvison, what do you mean by a needs assessment? How does it compare to the information that was sought in the OTA report and the evaluation completed by DOT and FEMA?

Mr. HARVISON. Mr. Chairman, I would suggest that any needs assessment within the context of the legislation that has been posed before us—and I would note that "needs assessment" is mentioned in a number of pieces of legislation—really goes almost hand-in-glove with the OTA report. I view a needs assessment as functionally being a two-step process.

Number one, and to use a term of questionable art in the transportation industry, you determine traffic lanes. If you are willing to go to what I call macro overview of the trucking industry—in other words, you want to say, "OK, how many hazardous materials are moving?"—finding traffic lanes should not be that difficult, particularly in the more environmentally sensitive and some of the higher risk commodities.

You determine the traffic lanes, you find out the chemical manufacturing facilities, distribution facilities, and what have you. There are a relatively finite number. Those individuals, by and large, know probably where 80 percent of their customers are. They know what mode they are shipping. You can pin down traffic lanes along that line.

Now the simple purpose of that first step is to simply say, "OK, this is where we need to put money for emergency response. We have to train people in this area." For instance, take two large chemical complexes—the Elizabeth, New Jersey area; the Los Angeles area would be another one; probably the most prominent in the U.S. would be the Houston area. Tremendous volumes of chemicals, some of them very, very hazardous, produced down there.

You can go down there and find out, as I say, on a macro basis, where those products are moving. I don't think it would be that difficult a job. Now if all of a sudden you wanted to go and say, "Well, I want to find out where each and every specific chemical, I want to know where all the formaldehyde is moving, I want to know where all the sulfuric acid is moving," that is a very difficult and very, very costly process.

But, as I say, you would all of a sudden determine just by natural processes that you are going to have to spend an awful lot of money in the Elizabeth, NJ, in the Houston, TX, in the Los Angeles area, and what have you, and you might not have to put a lot of resources in Montana. It was funny. I just received a request from the Montana Trucking Association to give a speech up there next month, and they said, "For God's sake, please don't talk about hazardous materials. We don't have any." That is what I am suggesting.

In terms of a needs assessment, let's take a look at the industry overall, find out where the products are moving. There are functionally only three modes involved. Truck is the most complex, Rails are fixed facilities. The shippers have the information, and if you don't ask too fine a question, you can find out. After that, then I believe that Congress can come back and say, "Okay, we have a pretty good idea of how many people have to be trained, what the size of the community is," and you can begin to make reasonable assessments as to the bucks necessary to invest in training and equipment.

Mr. ANDERSON. Cliff, you have been active in efforts to resolve the regulatory issues involved in the transportation of hazardous materials now for many years. The need for emergency response training has been an issue for many years, yet there seems to be no consensus on how to address that issue. In your view, what is the reason for failing to reach a consensus?

Mr. HARVISON. Mr. Chairman, I am sure you are referring to an activity that I and others also representing the American Trucking Association were involved in, that was somewhat euphemistically referred to as the Hazardous Materials Coalition. The coalition was a group of representatives of industry and State and local governments, particularly through their trade associations, and two things happened.

First of all, I think, very frankly, we went about as far as we could go. Many of the points I have raised in my testimony, regarding the fact that the Federal Government should be the only governmental entity putting out technical transportation regulations; I think the fundamental agreement on routing, where State lead agencies would control routing within the States and DOT would step in only in the event of a dispute.

Where we foundered—and I don't want to dispute the motives of any of the participants, because all modes of transportation were involved in the coalition, along with State and local governments—was that some entities, particularly the railroads, felt that they should not pay, in terms of everybody paying or being responsible for some type of payment into a hazardous materials trust fund. I think particularly some of the manufacturers of the hazardous materials had some very legitimate concerns about jumping into an unknown financial area. They were the ones that raised the issue of the needs assessment and what have you, but again I don't want to knock down the efforts of the coalition.

Many of the points involved in the coalition discussions are in the administration bill, which obviously has bipartisan support. The late chairman of this committee was one of the cosponsors of it. I think we did about all we could do, given the competitive pressures involved in that scenario.

Mr. ANDERSON. Mr. Applegate?

Mr. APPLEGATE. Thank you, Mr. Chairman, and I certainly thank the American Trucking Associations and the—are you a subsidiary of the American Truckers, the tankers?

Mr. HARVISON. We are an affiliated conference, Mr. Applegate. Essentially we share an awful lot of the policy positions with the American Trucking Associations, but as a conference I am responsible for essentially raising my own dues and meeting my own payroll.

Mr. APPLEGATE. Thank you.

Ms. Batts, you were talking about the—you sort of cast off the fact that only one-half of 1 percent of the 250,000 shipments are incidents. I don't know what degree that you are talking about, but of course one-half of 1 percent amounts to 1,250 a day. If we expanded that to the 500,000, we would be talking about roughly 2,500 a day, and I think that may be just about what we were estimating, about 2,500 incidents to one degree or another. Do you have any other information as to the degree or levels of incidents that you are talking about, I mean, from very dangerous spills or incidents to very minor?

Ms. BATTS. Well, that is how you define an incident is any time something happens that is out of the ordinary within that shipment, some of which are life-threatening, some of which are not at all. I don't dispute your numbers, and I don't want the committee to believe that I am throwing off those numbers and saying we don't have to worry about it.

I am trying to put it into perspective in terms of when people say you have these materials moving through your community all the time. That is correct. Let me point out that the Avon lady carrying a bigger bomb in the trunk of her car than the local UPS little brown truck. We have to put things into perspective. I don't mean to say in any way, shape, or form that we should not be concerned. We are deeply concerned. We recognize that every day there is a major catastrophe pending.

I think what has happened over the course of the last 14 years with the Hazardous Materials Transportation Act, with the agreements between the motor carrier industry and the shippers, that we are beginning to minimize the risk. What we are seeking now is to go even further.

That is why, for example, on the routing restrictions we would like to see some Federal guidelines. We do not think it is safe for a community to disallow hazardous materials on a four-lane, divided interstate highway, and then allow to throw if off onto their neighboring community, on a two-lane road which doesn't have any emergency responders. We think that is unsafe. I think that is what the gentleman from the townships was saying. What we would like to see are some Federal guidelines—not Federal restrictions, not Federal routing, but Federal guidelines—and we think that would do a great deal to improve the transportation of hazardous materials. The commercial driver's license which is being implemented now, with the endorsement for the driver of those hazardous materials will also improve the transportation of hazardous material.

Mr. **Applegate**. And I notice that of course you are supporting H.R. 4069, which I don't think does a whole lot, but what is basically your problem then with H.R. 3334?

Ms. **Batts**. The cost, pure and simple, the cost. For example, consider the average less than truckload shipment will be transported by minimum of four different trucks. You are talking $48 for one shipment. Such a cost starts to approach, in many instances, the cost of transportation alone. At some point start, one has to look at the cost of transportation versus the cost of the notification versus the cost of the product itself. In many instances, you may find that the cost of the system being advocated is more than even the price of the product itself.

Mr. **Applegate**. What you are saying is that $12 a shipment is entirely too much money.

Ms. **Batts**. Yes, $12 a shipment is entirely too much money when you start to add up 250,000 shipments a day——

Mr. **Applegate**. OK.

Ms. **Batts** [continuing]. Because I think what you ultimately end up with, sir, is the question that every shipper and every trucker is going to ask. That is, they are going to weigh off the cost of compliance with the cost of evasion. We can't get guys to properly placard their loads to go through tunnels in Pittsburgh. When they start weighing off $12 a shipment or maybe even $48 a shipment, the cost of compliance becomes far more than does the cost of evasion. Will they play the game of "Catch me if you can." What we want to do is to make a safer transportation system, and not put out, in essence, incentives so that someone would not comply.

Mr. **Applegate**. Well, of course we are talking about the cost will be borne by the generator.

Ms. **Batts**. Yes, but let me ask you——

Mr. **Applegate**. Sure.

Ms. **Batts**. From our perspective you have included the transportation industry because transportation becomes a generator every time it picks-up a shipment. I don't know what a "generator" is. I know what a shipper is but I don't know what a "generator" is.

Mr. **Applegate**. The one who generates the waste.

Ms. **Batts**. Which the trucking company puts onto another truck. The shipper doesn't know the number of that new truck, so then the trucking company would have to enter the data. Then it goes to a break bulk facility and it goes onto a different truck. The trucking company would then again have to enter the new data because if all the emergency responder had was the initial truck number, it would do the responder no good because it would no longer be on that truck. So unless you can go back and tell the shipper, "Well, you have to do it four or five times, depending on what kind of facilities we are going through * * *"——

Mr. **Applegate**. But there isn't any charge to the trucker.

Ms. **Batts**. But the shipper will not know what truck it is on, and in many instances that trucker can't tell the shipper until after it has gone on a truck what the truck number is.

Mr. **Applegate**. Well, it seems to me that with the information that we have and the systems that we have, that there should be no problem in knowing what truck that is going to go on. You are talking about $12 a manifest. We are not talking about a very complicated system, and we are talking in terms of trying to develop a safety program.

We are talking about putting hazardous and toxic waste into a truck and shipping it someplace and making sure that it is going to reach its destination point, and at that point that we know that it is secure and it didn't get dumped along the way. But if it does, through an accident, and there is a spill, then people are going to be able to respond adequately. Right now we just don't have the system to do it.

I don't see what is so complicated about that. I think what you are doing is, you are trying to make it more complicated in your explanation. I think what we have to do, we have to have a little bit more of an allegiance, rather than to the generators or the chemical companies, we have to have more of an allegiance to the people and their safety, and to the communities. I mean, that is exactly the way I feel about it.

Ms. **Batts**. Sir, we share your concern for the traveling public. Indeed, the programs that we have come forward with, are going to do exactly that. The question in terms of what can the industry do electronically we are at the point of within the trucking industry trying to establish electronic data interchange standards through the Transportation Data Coordinating Committee. It is getting off the ground, but there are many, many trucking companies that do not even have their own small, little minicomputer.

The trucking industry is not highly integrated into the electronic data interchange age of technology. It is a sad commentary on the trucking industry, but it is not there yet. I don't think we want to design the system of electronic data interchange based on hazardous materials. I think the money could be better spent trying to train the emergency responders, to better train the truck drivers, to establish better routing systems, and to make sure that the containers that we are putting these products into are safe with structural integrity.

Mr. **Applegate**. Under the Superfund bill, these trucks have to carry a minimal amount of liability insurance.

Ms. **Batts**. Yes, under Superfund as well as under the Motor Carrier Act of 1980.

Mr. **Applegate**. Yes. What is that?

Ms. **Batts**. It is $5 million per incident.

Mr. **Applegate**. That is $5 million?

Ms. **Batts**. Yes.

Mr. **Applegate**. Do you think that if there was—was there anything that you wanted to add to that?

Mr. **Harvison**. That might be amended to say up to $5 million.

Mr. **Applegate**. Oh, up to $5 million, yes.

Mr. **Harvison**. Correct.

Mr. **Applegate**. Well, do you think that there would be a lessening of that amount of liability if we had a system such as I am proposing?

Ms. **Batts**. If I could ask Mr. Harvison to respond, he is much more involved in the insurance side of it than I am.

Mr. **Harvison**. Mr. Applegate, I have dealt with the insurance community, good, bad, or indifferent, for a number of years. Right now, as a matter of fact, a number of our association members have their own captive insurance program.

I think you are going to find that the insurers rate carriers, not systems, and that a particular premium level that a carrier is going to pay would not be reduced in and of itself just because a carrier hooks onto a particular system. These premiums, particularly for the three types of coverage that are mandated by the Motor Carrier Act, which are public liability, property damage, and environmental restoration, are primarily going to be actuarially based and they are going to be incident-rated.

The mere fact that the carrier is involved in a state-of-the-art communications system that would allow emergency responders to be better equipped on the one hand, and be more active and get to the scene of the incident quicker, is really not going to subtract from the carrier's ultimate liability, because by that time the incident has indeed happened. The liability clock is running at that point.

Mr. **Applegate**. That's true, but that is under the system of response now, and under a system——

Mr. **Harvison**. Again, sir, the insurance carrier really doesn't care about the system of response. The insurance carrier says, "Hey, you have created an environmental incident here," at the minute the container breaks.

Mr. **Applegate**. Yes, but it can be eliminated, the severity of it can be eliminated by quickness of response.

Mr. **Harvison**. Not necessarily, sir. We are talking about vehicles, for instance, a tank truck, a 40-foot semitrailer, you are talking 8,000 gallons of gasoline. If you rupture a compartment, you may be talking about 3,600 gallons of gasoline. You have lost product, unless you literally have somebody there at the scene within moments of the incident. Again, the insurance companies rate and evaluate on an actuarial basis.

Mr. **Applegate**. But you are talking about gasoline and you would know what is in that gasoline tanker, but you don't know what is in those other tankers. When you take a look at this book, all of these things that they have in here, I mean, gasoline is just one of them but you have all these, a combination of which could be a very, very, very hazardous and toxic substance——

Mr. **Harvison**. You are absolutely correct, Mr. Applegate.

Mr. **Applegate** [continuing]. If it comes together, and that can be prevented by instantaneous information that the local fire fighters could utilize to prevent that from happening. Under the system, the way it is right now——

Mr. **Harvison**. Well, the information provided under your system, as I interpret your legislation, and I assure you I have read your legislation many times, it is not going to prevent the incident.

Mr. **Applegate**. That's right.

Mr. **Harvison**. I would go back to a basic fundamental of underwriting of motor carriers. It is rate based, it is actuarial based, and every year the underwriter comes in and looks at one thing: He says, "What is your loss-to-premium ratio for the past calendar year," and that begins the calculation phase. He is not interested in how new the carrier's vehicles are. He is not interested in what system is hooked up and what have you. It is a cold, hard dollars calculation.

Mr. **Applegate**. That's true. It won't prevent the accident, there is no question about it, but the severity of the accident is what we are talking about. If you go in under a system that may be in existence right now, and in the case again of Miamisburg or any of the others, if you have to wait an hour or two or three and in a couple of hours something happens that causes the death of 500 people, I would think that would be the degree of severity.

If you had a system that you could access to and have the information immediately and prevent that, I mean, you have saved millions and millions of dollars. And if you think Bhopal, which I think they were trying to settle for a couple of billion dollars or whatever it was, that would be peanuts compared to what they would have to settle for in this country. You are talking about billions of dollars.

Mr. **Harvison**. Given the rate of exchange, I have no doubt about it.

Mr. **Applegate**. Yes, so there definitely would be a reduction in the amount of liability. Now I haven't talked with any of the insurance companies yet, but we intend to do that just to find out, to see whether or not there would be a degree of reduction.

Mr. **Harvison**. Mr. Applegate, I can only respond in this one way, and I don't want to draw it out any more.

Mr. **Applegate**. OK.

Mr. **Harvison**. I had four carriers last year who had zero accidents. These are small tank truck carriers of gasoline. They didn't have one accident. In the past 2 years, their insurance premiums have gone up a total of 600 percent. They never made a claim. They had a perfect safety record, as far as that carrier was concerned. Now you get representatives of the insurance industry up here to say that if we hook onto your system, they will reduce premiums, you are going to spark a renewal and a reevaluation of the proposal.

Mr. **Applegate**. Maybe the insurance companies need a reevaluation?

Mr. **Harvison**. There are apparently seven States' attorneys general that are seeking to do that.

Mr. **Applegate**. Well, let me just ask this. The American Truckers oppose State and local routing requirements.

Ms. **Batts**. No, no. We do not oppose State and local routing requirements. We want the Federal guidelines so that State and local communities cannot engage in what we call the "NIMBY" philosophy, which is "not in my back yard," where they unilaterally will dump their hazardous materials onto the roads of another locality, and that other locality had no input into that decision.

Mr. **Applegate**. Yes.

Ms. **Batts**. We are not opposed to local restrictions.

Mr. **Applegate**. OK. Well, I think that's OK right now. I mean, I appreciate the answers to the questions and I think it was very meaningful. I thank you for being here and talking about it, and your input into our testimony.

I will turn this back over to you, Mr. Anderson.

Mr. **Anderson**. Mr. Grant, any questions?

Mr. **Grant**. I don't think so, Mr. Chairman.

Mr. **Anderson**. Oh, thank you. [Laughter.]

Did I wake you up? [Laughter.]

Are we going to have the insurance companies as witnesses? They are not listed as witnesses.

Mr. **Grant**. No, I mean not today.

Mr. **Anderson**. We had insurance about a year and a half or 2 years ago.

Mr. **Grant**. I wasn't here then.

Mr. **Anderson**. Anyway, thank you, Lana Batts and Clift Harvison, for a very nice, excellent presentation.

Mr. **Harvison**. Thank you, Mr. Chairman.

Ms. **Batts**. Thank you for the opportunity.

[The prepared statements of Ms. Batts and Mr. Harvison follow:]

Before the

UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

MAY 25, 1988
WASHINGTON, DC

Statement of the

AMERICAN TRUCKING ASSOCIATIONS
On
REAUTHORIZATION OF HAZARDOUS MATERIALS TRANSPORTATION ACT

Thomas J. Donohue
President and Chief Executive Officer

I am Thomas J. Donohue, President and Chief Executive Officer of the American Trucking Associations. I welcome the opportunity to testify on the matter of hazardous materials transportation legislation. This subject is of vital importance to all motor carriers which transport hazardous materials: large and small, private and for-hire; in bulk containers such as tank trucks; and in drums, cartons, cylinders, portable tanks, and packages.

The motor carrier industry is not a single industry; rather, it is a collection of industries -- from truckload to less-than-truckload, from general freight carriers to specialized carriers such as munitions transporters, from coast-to-coast delivery to local pick-up and delivery. The trucking industry is composed of more than 260,000 American firms, and accounts for 77 percent of all freight transportation revenues in this country. The trucking industry employs 7.2 million Americans and generates annual revenues in excess of $215 billion. As the trucking industry's new slogan states: "Without Trucks, America Stops". The public and the American economy depend on truck transportation to provide the goods, services, and materials that move America.

As you know, Mr. Chairman, these different industry segments frequently are not in agreement with each other. However, the industry is united on the need to have a stronger Federal leadership for the safe transportation of hazardous materials. We stand united with our 51 affiliated trucking associations located in every state and the District of Columbia, 10 affiliated conferences, and several thousand motor carrier members, representing every type and class of motor carrier in the nation -- for-hire and private as well as regulated and exempt -- in support of Federal authority which is more clearly defined to avoid regulatory conflicts that adversely impact safety and efficiency of hazardous materials transportation.

The hazardous materials legislation which you enact will impact the operations of almost all major motor carriers, and a large percentage of small carriers. I am pleased to share with you the trucking industry's views on what must be done to improve both the safety and efficiency of hazardous materials transportation.

Last summer, American Trucking Associations appeared before the Subcommittee on Transportation, Tourism, and Hazardous Materials to urge passage of hazardous materials legislation similar to H.R.4069, the Department of Transportation's bill, which is under consideration today by this Committee. We commend DOT for its proposals to improve the safe transportation of hazardous materials and we support the provisions of H.R.4069, with modifications. I urge that you expedite its passage. With enactment of this legislation, the safety and efficiency of hazardous materials transportation can be improved and we can stop the proliferation, around the nation, of unnecessary and restrictive laws which do nothing for safety and seriously burden commerce.

ATA's position on the hazardous materials regulatory authority of Federal, state and local governments is:

1. State or local laws relative to routing of hazardous materials transporters should be allowed if they conform to guidelines or performance standards promulgated by the Department of Transportation. Such performance standards should assure that state or local governments will not impose routing requirements that burden commerce or adversely affect safety. ATA strongly opposes a routing standard that would allow governmental agencies to specify the mode of transportation for hazardous materials.

2. Only the Federal government should have authority to establish regulatory requirements governing: container and tank construction; vehicle placarding; package marking, and labelling; shipping paper requirements; hazardous materials designations and definitions. Variations in such requirements from one jurisdiction to another is unnecessary. It is totally impractical to allow state or local regulations dealing with these matters because they would result in a variety of unjustified requirements which would adversely affect safety and the ability of transporters to comply.

3. The Federal government should have the sole authority to require reports on hazardous materials incidents. This authority is necessary to collect and compile accurate data that is needed nationally, and to avoid duplication of reporting to numerous agencies throughout the nation. Federal reporting requirements should preempt local and state requirements, except when immediate notice is required for emergency response purposes. The Federal government's data collection and analysis should be designed for use by state and local governments as well as industry.

4. Prenotification of hazardous materials movements, and tracking of such movements is complex, cumbersome, costly, and offers very little in the way of safety benefits. Authority to require prenotification should be limited to the Federal government and to materials designated by the Department of Transportation, such as spent nuclear fuel and high level radioactive waste shipments.

5. To promote safety of hazardous materials transportation, and compliance with regulatory requirements, DOT should establish a registration program which would require each registrant to demonstrate safety fitness, including minimum levels of financial responsibility as a condition of registration. State and local governments should not

be allowed to duplicate registration requirements or fees.

Of the legislation which you are considering today, H.R. 4069 contains many of the trucking industry's recommendations. If enacted it will have a far reaching positive impact on the safety of hazardous materials transportation, without dismantling and re-building the current regulatory structure.

The following are our comments in support of this bill, and on matters of concern to us on various issues.

ROUTING

ATA believes the hazardous materials routing provisions of H.R. 4069 would eliminate the practice of state and local governments establishing routing requirements without proper consideration for safety and the impacts of their actions on commerce. It would reduce the adverse impacts that such requirements may have on neighboring jurisdictions.

It is our position that U.S.DOT must be involved in the routing process at an early stage by developing and providing specific guidelines to assist states and localities in establishing routing for hazardous materials transportation. Routing restrictions often lead to disputes between industry and state or local governments and as a result the restrictions are brought to the attention of DOT by a request for a ruling on whether or not the restriction is "inconsistent" with DOT requirements. The current Department of Transportation process of issuing "inconsistency rulings" to settle disputes after routing rules have been established is inefficient, cumbersome, and results in inordinate delays in reaching conclusions.

Enactment of H.R.4069 would allow the Secretary to issue standards for the designation of routes over which hazardous materials shipments may be transported by motor carriers. Following action by the Secretary, no state or political subdivision could designate highway routes for the transportation of hazardous materials except in accordance with the standards. We therefore strongly support this provision of H.R. 4069.

We also firmly stand behind the "dispute resolution" process in which H.R.4069 provides authority to the Secretary to promulgate regulations for resolving routing disputes between the states. Such regulations would favor a state that has established a hazardous materials highway route which meets Federal standards and which provides the greatest level of highway safety without unreasonably burdening commerce.

FEDERAL PREEMPTION

The trucking industry believes that hazardous materials reauthorization legislation should explicitly clarify that the

Federal government has sole authority in the following areas:

- The designation, description, and classification of hazardous materials.
- The documentation, description and preparation of hazardous materials shipping documents.
- The design, construction, maintenance, marking, repairing, testing and certification of all packaging including tanks, cargo tanks and equipment which is used in the transportation of hazardous materials.
- Requirements for reporting incidents involving the unintentional release of hazardous materials in transportation, and the collection of data concerning such incidents.

These issues have been properly addressed in H.R.4069. It clearly establishes Federal and state roles with regard to safety responsibility for hazardous materials transportation.

SAFETY PERMITS

ATA also supports the provision in H.R.4069 which directs the Secretary to establish a system of safety permits for the transportation of any Class A or B explosives, any hazardous material which has been designated as toxic by inhalation, or any highway route controlled quantity of radioactive materials. This provision should be applicable to every mode of transportation and not just to motor carriers, as the hazards of these materials are present regardless of how they are transported.

ATA supports the concept of immediately suspending or revoking a safety permit if there is a serious safety problem. We believe that the definition of imminent hazard in H.R. 4069 is undesireable because it would permit the government to rescind a safety permit under conditions which do not justify such drastic action. A more desireable standard is established by the definition in the "Motor Carrier Safety Act of 1984," which states "imminent hazard means any condition of vehicle, employee, or commercial motor vehicle operations which is likely to result in serious injury or death if not discontinued immediately." (49 USC 521(b)(5)(B)). ATA recommends modification of this definition and its inclusion in H.R. 4069 to read: "imminent hazard means any condition of equipment, employee, or transporter operations which is likely to result in serious injury or death if not discontinued immediately."

PENALTIES

The current language in Section 110 of the Hazardous Materials Transportation Act, which requires violations to be done "knowingly", should be retained. We can understand that deletion of this word will make prosecution of violations easier for DOT. However, ATA is concerned that if "knowingly" is deleted carriers and others involved in hazardous material transportation may become liable for fines of up to $10,000 per day for minor infractions of the complex and voluminous regulations governing the transportation of hazardous materials. The deletion of knowingly from the law will not measurably improve the safe transportation of hazardous materials, but would have serious adverse impacts on the financial welfare of transporters, especially motor carriers that are currently having financial problems.

For the reasons we have stated, H.R. 4069 is a desirable piece of legislation and has our support with the modifications which we have noted.

ISSUES OF CONCERN

Taxes and Fees: The trucking industry recognizes the need for funds to improve training and equipment of responders to emergencies resulting from the transportation of hazardous materials. We are opposed, however, to the growing tendency of states and local jurisdictions to impose fees, taxes and special permit requirements that have no relationship to the needs of emergency responders. We support a carefully structured Federal fund to meet such needs provided that the sources of revenue for the fund are equitable for all modes of transportation and include shippers and container manufacturers. We cannot support funding based solely on revenues derived from the Highway Trust Fund and other special taxes on highway transportation.

Flow Studies: It is apparent that information concerning the flow of hazardous materials shipments by transportation mode and highway routes is needed before a determination can be made of emergency response needs and funding to provide for emergency response equipment and training. We do not believe that special flow studies are necessary. A review and analysis of roadside inspection reports submitted by states participating in the Motor Carrier Safety Assistance Program could provide most of the information. Other data that has already been collected by DOT, EPA, FEMA, and private agencies such as Chemical Manufacturers Association could provide extensive data. At most, the Congress should direct the Secretary to analyze available data and should authorize funding necessary for such analysis.

Pre-notification and Tracking: Given the fact of at least 250,000 hazardous materials shipments daily in the U. S. and the frequent transfer of shipments, there is no practical and cost effective way of providing pre-notification of hazardous materials shipments, or of tracking such shipments. Shipments move from shipper to carrier, from one mode to another, from one vehicle to another, and from carrier to consignee. Emergency responders would never know if the necessary updates concerning vehicle identity had been made. As a result there would be a potential for chaos as emergency responders tried to ascertain whether to rely on shipping paper information on the vehicle (or not on the vehicle) or on information from a tracking center.

When one considers that only 1/2 of 1% of shipments of hazardous materials are involved in incidents requiring emergency response, and that most of these do not create a problem of identification it is obvious that there is little or no safety benefit attached to pre-notification or tracking proposals.

SUMMARY

In summary, American Trucking Associations supports the provisions of H. R. 4069, with modifications.

We support the granting of authority to the Secretary to establish routing guidelines for state and local jurisdictions. Such authority is essential to eliminate routing problems that have been imposed on transporters with increasing frequency in recent years.

Granting sole authority to the Federal government for technical standards which govern preparation of shipments and hazard communications is also essential for safety and to promote compliance through uniformity.

We agree with the provision for safety permits with the exception of the definition of "imminent hazard". Safety permits should not be rescinded unless a condition is likely to result in serious injury or death if an operation is not discontinued immediately.

H. R. 4069 must not eliminate the word "knowingly" from the Act. In view of the complexity and volume of hazardous materials regulations, shippers and transporters should not be subject to penalty if a violation is not committed "knowingly".

We strongly support the provision of H. R. 4069 which grants sole authority to the Secretary to require written notification of hazardous materials incidents.

ATA does not support legislation which would impose taxes and fees on motor carriers that are not equitable with taxes and fees on other industries involved in hazardous materials transportation. We do not believe that flow studies are needed to determine routes and quantities of hazardous materials shipments, but we support analysis of data that is already available through MCSAP and other sources. We believe that requirements for pre-notification and tracking of hazardous shipments would result in an impractical and costly accumulation of data that would be useless, for the most part, and which might result in confusion and chaos for emergency responders.

In closing, I wish to assure you of ATA's continued commitment to the safe transportation of hazardous materials on our nation's highways. We offer our support for passage of the reauthorization of the Hazardous Materials Transportation Act in this session of Congress. I will be pleased to answer any questions.

BEFORE THE UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON PUBLIC WORKS & TRANSPORTATION

Subcommittee on Surface Transportation

a statement by:

National Tank Truck Carriers, Inc.
2200 Mill Road
Alexandria, VA 22314

Clifford Harvison, President

in the matter of:

HR 4069 and Related Bills

May 25, 1988

Mr. Chairman and members of the Committee, thank you for the opportunity to testify. My name is Clifford Harvison, and I am President of National Tank Truck Carriers, Inc. (NTTC), a trade association representing an estimated 90 percent of the for-hire tank truck capacity in this nation.

Our members specialize in the transportation of bulk commodities, over 70 percent of which would be classified as hazardous materials, hazardous substances or hazardous wastes.

Mr. Chairman, the fact that this Committee is (today) considering some 11 pieces of proposed legislation is more than ample manifestation of the public's justifiable concern with respect to "hazmat" transportation.

Obviously, I have no desire to test my time limit (or this Committee's patience) with a section-by-section dissection of all of these bills, therefore, allow me to set out the position of my members in broad general concepts.

TECHNICAL REGULATIONS

Hazardous materials containers as well as the handling and operational rules which are imposed on the owners and operators of those containers, must be uniform. Simply stated, industry can't live with a situation where "the rules of the game" change just because a truck passes a jurisdictional boundary.

Currently, the Department of Transportation has codified detailed regulations specifying standards for container construction and maintenance, inspection, testing, and certification. Additionally, DOT specifies methods of commodity classification (for hazard determination), and a "Hazard Information System" (the "key" to emergency response).

This regulatory program is effective and undergoes constant refinement via docketed proposals from industry, government and public interest groups. These rules must--and do--accommodate the needs of carriers and shippers involved in intrastate, interstate and international distribution.

We believe, therefore, that the language of the Hazardous Materials Transportation Act of 1974 should be amended to clarify that the Secretary, DOT shall have sole and unilateral jurisdiction over technical and operational regulations. Likewise, we believe that the opportunity for states and local governments to petition for waiver of preemption (as codified in Section 112 (b) of the Act) should be retained and offers non Federal jurisdictions the opportunity to regulate where exceptional circumstances (at the local level) so dictate.

REGISTRATION

For the past decade, every Secretary of Transportation has been subjected to criticism for their reluctance to implement the permissive carrier registration program provided for in Section 106 (b) of the Act.

In all candor, critics must recognize that such might entail a massive registration program and would necessarily involve entities such as independent farmers (transporting nitrogen fertilizer solutions) and thousands of truck operators whose involvement with hazardous materials is marginal (at best).

NTTC believes that the objective of a registration program is to (essentially) "pinpoint" certain carriers which, by the very nature of their operations, should be held to a higher standard of regulatory compliance. Implicit in any "hazmat" registration program is the reality that, if registration is withdrawn, the carrier may not conduct hazardous materials transportation.

Thus, it is reasonable to conclude that an effective registration program--one not diluted by thousands of marginally involved carriers--should be centered on operations posing the most severe potential risks to the public.

Tank truck carriers obviously fit into that category as do carriers of commodities deemed to be "toxic by inhalation" and carriers hauling certain explosives, munitions, radioactives and poisons. NTTC supports such a DOT-administered "registration" program, but suggest that it be limited to tank truck carriers and those transporting so-called "high hazard" commodities.

Mr. Chairman, we have taken the liberty of suggesting an "alternative" to registration, centered on a mandated exchange of certain information between carrier and shipper. I elaborate on this concept in the section entitled "Insurance", below.

ROUTING

Virtually all of the bills, under consideration by this Committee, contain language which suggests a more disciplined approach to the contentious and politically-sensitive topic of the routing of hazardous materials.

It is important for this Committee to recognize that the term "routing" embraces more than just the use (or prohibition on the use of) a particular highway or roadway. By necessity, "routing" must be considered to embrace so-called "time of day restrictions" (e.g. rush hour curfews, etc.).

Thus, any amending legislation, enacted to circumscribe or otherwise control routing decisions, imposed at the local level, must be drafted in sufficiently broad language accommodate this reality.

As transporters of "hazmat" (except radioactives), tank truck carriers are (more often than not) the "target of choice" of local officials seeking to impose routing restrictions (including so-called "time-of-day" restrictions).

NTTC states affirmatively that we have no Pavlovian opposition to all routing schemes. In fact, for obvious economic reasons (a unit stuck in traffic wastes money and time), the industry attempts to avoid areas of known congestion.

In fact, our membership can support any routing plan which meets the following criteria:

1) the plan is developed via the consultative process involving carriers and all affected jurisdictions;

2) the plan is approved and administered by a lead State agency which has the power to preempt non-conforming routing and time restrictions implemented by state political subdivisions;

3) the plan conforms to applicable Federal DOT guidelines; and,

4) the plan proscribes suitable alternative routes which create neither undue circuity nor delays in serving the industry's customers.

Tank truck carriers are opposed to routing (and time restriction) schemes wherein the local jurisdiction simply seeks to "export risk" or make local operating conditions so onerous as to discourage participation in that marketplace.

FEES AND PERMIT STRUCTURES

Today, the tank truck industry is being besieged by a rash of state and local ordinances which mandate that carriers of hazardous materials obtain a permit and/or pay a fee when transporting regulated commodities into, out of or through the regulating jurisdiction. Such permit/fee structures may be applicable to (either) all vehicles operated by the carrier or individual vehicles operated by that carrier.

NTTC holds that such indirect taxation and permitting is both discriminatory and unduly burdensome.

It is discriminatory because the permit/tax scheme is "triggered" by the nature of the commodity--not the characteristics of the vehicle or its commercial use. Additionally, it is imposed whether or not the vehicle requires the expenditure of the resources of the regulating jurisdiction.

Such structures are unduly burdensome because they mandate excessive expense, and create administrative "nightmares" and unnecessary delays. For instance, the nation's largest tank truck carrier operates approximately 2,000 vehicles. Any given vehicle may operate in "local" service today; yet be dispatched, tomorrow, from Wilmington, Delaware to Houston, Texas.

Given the hundreds of State and local jurisdictions between Wilmington and Houston one must realize that there is no known data base upon which a carrier could rely to determine which jurisdiction(s) has a permit/fee structure and/or the applicable local requirements for compliance.

While carriers may find their operations hamstrung (financially and/or administratively) by these local requirements; the industry recognizes the legitimate need of some jurisdictions to acquire, train and implement enhanced emergency response equipment and manpower to deal with "hazmat" incidents.

NTTC and its members support the concept of a "Hazardous Materials Transportation Trust Fund" which would lcollect revenues at the Federal level, for distribution of the proceeds to the States for the direct and sole purpose of increasing the emergency response capabilities of selected jurisdictions. Our position in this matter is based upon the following principles:

1) An equitable fee system imposed on hazardous materials carriers (of all modes), shippers and container manufacturers;

2) A "needs assessment" to be conducted by the Secretary of Transportation and transmitted to the Speaker of the House and the President of the Senate which would recommend funding needs; and,

3) Upon implementation of the Federal "fee" system, (subsequent) statutory preemption of state and local fee/permit systems which are imposed on transportation facilities (including vehicles and rolling stock) when such facilities are utilized in the transportation of hazardous materials.

INSURANCE

Mr. Chairman, in our testimony, above, we commented favorably upon required implementation of a limited "registration" program for "hazmat" carriers (among them "tank truck carriers").

As an alternative, NTTC offers for the Committee's consideration another program which (we believe) would accomplish the same goals (as registration) albeit with no Federal involvement.

As background, it should be noted that, in 1980, the Congress passed the Motor Carrier Act. Among other elements, that legislation required carriers of hazardous materials to obtain "evidence of financial responsibility" (i.e. insurance or bonding) in amounts considerably greater than underwriting levels for carriers of non hazardous commodities.

The objective of that statutory provision is identical to the objective of those supporting a "registration" program--that is, increased public protection. Simply stated, the Congress realized that a tank truck load of gasoline creates greater risk potential than a truckload of furniture.

Given this similarity of objectives, therefore, we ask the Committee to consider a statutory requirement that tank truck carriers of hazardous materials and other carriers of so-called "extremely hazardous" materials be required to document their compliance with Section 30 of the MCA to all of their shippers; and, that shippers be prohibited from using any carrier which cannot demonstrate compliance.

In fact, many major shippers, today, require pre-trip documentation of the carrier's Section 30 compliance. We believe this should be a statutory requirement.

Adoption of such a "certification" process, involving only those in a business transaction, would (NTTC believes) accomplish the same goals as a "registration" program; and, at the same time, avoid the addition of another administrative layer at the Department of Transportation.

SUMMARY

Mr. Chairman, as noted, this Committee has been presented with a variety of legislative "options" for consideration. However, virtually all of the bills share one common theme--that is, a better and more precise definition of the roles of the Federal and State governments in controlling hazardous materials movements.

NTTC believes that H.R. 4069, introduced with bipartisan support, best accommodates the needs of the tank truck industry. The bill would specify that the Secretary of Transportation would develop and promote uniformity in technical and operational standards; while acknowledging that the States are best suited to establishing and enforcing "hazmat" routes.

Additionally, we have offered a proposed amendment (dealing with a substitution for carrier registration) for your review and consideration.

Again, thank you for allowing NTTC to participate in today's hearing, and I will be happy to respond to any questions.

Respectfully submitted,

Clifford J. Harvison
President

attachment

PROPOSED AMENDMENT TO THE HAZARDOUS MATERIALS TRANSPORTATION ACT

(Objective--To enhance public safety by requiring that certain carriers and shippers of hazardous materials exchange documented information verifying that motor carrier operations are conducted in compliance with Section 30 of the Motor Carrier Act of 1980).

DEFINITIONS

For the purposes of this Section:

"Secretary" shall be the Secretary of Transportation.

"Carrier" shall have the same meaning as presently defined at Title 49 CFR 171.8.

"Cargo tank" shall have the same meaning as such term is defined in Section 30 of the Motor Carrier Act of 1980.

"Shipper" shall be defined as "the person (including the United States Government) who transfers hazardous materials from a manufacturing facility, storage facility and/or pipeline into a container which complies with the packaging regulations of the Secretary."

STATUTORY PROVISION

Amend Section XXX to read as follows:

"Within 90 days of enactment of this Section, the Secretary shall amend the Federal Motor Vehicle Safety Regulations and the Hazardous Materials Regulations, as appropriate, to require shippers and carriers of certain hazardous materials to verify carrier compliance with the requirements of Section 30 of the Motor Carrier Act of 1980 at the time of or prior to the beginning of transportation operations.

At the minimum, the Secretary shall require verification between shippers of all hazardous materials (as defined by the Secretary) and carriers utilizing cargo tank motor vehicles in the transportation service performed for said shipper.

Additionally, and at the minimum, the Secretary shall require verification between shipper(s) of commodities identified or defined (by the Secretary) as "toxic by inhalation", "radioactive", "Explosives" (including munitions transported on account for the United States Government) and "Poison"; and motor carriers transporting said commodities for said shipper(s).

Regulations issued pursuant to this Section shall require some type of documentation between shippers and carriers but shall accomodate modern document transfer technology such as photocopying, facsimilie transfer, computer transfer, etc.

This Section should not be interpreted to require any record-keeping or administrative requirements by the Secretary beyond publication of the final regulations mandated in this Section.

Mr. **Anderson**. Our next witnesses are a panel of two: Paul Rankin, the managing director, Hazardous Materials Advisory Council, and Ronald M. Jacobson, director of transportation of Rhom & Haas Co. of the Chemical Manufacturers Association.

I have Paul Rankin's prepared statement here, and then there is the Chemical Manufacturers Association. That is yours, isn't it, Mr. Jacobson?

Mr. **Jacobson**. Yes.

Mr. **Anderson**. We do have your prepared statements, both of them. They will be made a matter of the record in their entirety. Please proceed.

TESTIMONY OF PAUL RANKIN, MANAGING DIRECTOR, HAZARDOUS MATERIALS ADVISORY COUNCIL; AND RONALD M. JACOBSON, DIRECTOR OF LOGISTICS, RHOM & HAAS CO., REPRESENTING THE CHEMICAL MANUFACTURERS ASSOCIATION

Mr. **Rankin**. Thank you, Mr. Chairman.

The Hazardous Materials Transportation Act, which is now almost 14 years old, has proven to be a very durable and, flexible law. It has contributed greatly to safety improvements in the field of hazardous materials transportation and permitted the development by DOT of a very extensive and quite effective regulatory regime.

Nevertheless, in many respects the act is beginning to show its years. There are some questions within industry concerning the scope and applicability of the statute in such key areas as, for example, route selection, enforcement, regulatory preemption, and permitting.

Among the many bills that are before this subcommittee today, H.R. 4069 is a concise and somewhat innovative attempt to resolve or at least clarify some of the central legal and regulatory issues associated with HAZMAT transportation. The bill preserves the essential structure of the existing law, while strengthening the ability of DOT to promote the safe transport of these materials. I would like to address several key aspects of the proposed legislation now.

With regard to preemption, which is a key element in the bill, HMAC believes that the process of regulating the movement of hazardous materials is and must continue to be shared among local, State, and Federal authorities. This fact is acknowledged in the statute and has also been developed in a number of administrative and legal decisions over the years. Nevertheless, the boundaries of this intergovernmental relationship are not precise, and therefore are the subject of continuing controversy and, in some cases, protracted litigation.

H.R. 4069 would help to rectify this situation in several ways. First, the bill would mandate that the Secretary of the Department of Transportation issue regulations governing specified aspects of hazardous materials transport, whereas now that authority is permissive. Second, it would enumerate specific subject areas such as shipping documentation, equipment standards and the like, and reserve their regulation exclusively to the Federal Government. Finally, the bill would extend DOT regulatory authority to all intrastate movements of hazardous materials. Currently, DOT authority in this area is restricted. I should add we wholeheartedly support each of these three provisions.

The proposed amendments also would revise extensively the process by which State or local requirements affecting hazardous materials transportation are reviewed for consistency with the act. HMAC again supports this effort because there is presently no statutory definition of what is "inconsistent," there is no requirement mandating initial Federal review of potentially violative State or local laws, and there is no requirement that a Federal inconsistency decision, once reached, be adhered to.

In the interest of time I will forego a description of the proposed preemption determination process that is contained in H.R. 4069, but I will reiterate for you that HMAC feels it will greatly improve the existing system by limiting parallel appeals—that is, judicial and administrative— imposing a decision deadline of 180 days on the Secretary, and ensuring that an administrative decision made in accordance with the act is fully considered in any judicial review of the matter.

In the area of highway routing, H.R. 4069 would be quite beneficial in that it would permit the DOT to develop performance standards for States wishing to control the selection of highway routes that hazardous materials transporters may take, thereby imposing some degree of uniformity on the system. The bill would also establish an administrative process for resolving disputes among States over legally developed but conflicting routing actions. We urge that in any formal process of State selection of highway routes, provision be made for the participation of all interested parties, including shippers and carriers.

In the area of permitting, this bill would change the current situation by requiring motor carriers and motor private carriers transporting certain high hazard materials to obtain a Federal permit from the Department of Transportation. HMAC in the past has opposed permitting programs. However, we are prepared in this case to support the limited program called for in the bill, so long as the standards of compliance are reasonable, the application process is fair, filing fees do not exceed the administrative costs of issuing that permit and, finally, parallel State permitting programs are not allowed.

In the area of enforcement, there are a couple of changes we would like to see made in H.R. 4069. We strongly oppose the proposed deletion of the word "knowingly" from the existing law. By deleting this word, which is proposed in H.R. 4069, the statute would impose strict liability and would automatically subject a party to penalties regardless of circumstances and without exception for inadvertent or mistaken behavior.

The bill would also revise the existing definition of the term "imminent hazard." Eliminated would be the requirement that there be a "substantial likelihood" that serious harm will occur before the Secretary may restrict or suspend transportation activity. The new definition in our view is unnecessarily broad, and we are unaware of any occurrences in the past where the application of the existing standard has prevented the Secretary from swiftly taking action where necessary. Therefore, we would urge that the existing definition of the term "imminent hazard" be retained in the act.

Finally, the proposed legislation does not address the subject of emergency response. HMAC believes, however, that it is essential for both Federal and State governments to take action that will lead to the development of a nationally coordinated hazardous materials response program. Such a program should include State identification of existing resources and capabilities of State and local emergency responders from the public sector; a mechanism for providing appropriate training; and a plan for regionalizing the delivery of emergency response services. Frankly, the testimony that was given earlier by the Virginia Secretary of Transportation outlined just the kind of a program that we have been considering.

The Federal Government, in cooperation with interested parties, should develop a model program that States could use in establishing their own regional networks of public emergency response teams, and the States of course would be encouraged to support these teams in a fitting manner.

That concludes my oral testimony. I appreciate the opportunity to be here today.

Mr. ANDERSON. Thank you, Paul.

Mr. Jacobson, the distinguished Congressman from Pennsylvania, Bill Clinger, wanted to be here to introduce you, but I was just notified that he is going to be held up for a minute or so, and so you are going to have to take second best. I am going to introduce you and when he gets here, maybe he can fill in.

Anyway, our next witness is Ronald M. Jacobson, the director of logistics, Rohm and Haas Co., with the Chemical Manufacturers Association. Again, as I said earlier, we do have your prepared statement. You can present it any way you wish. The floor is yours.

Mr. JACOBSON. Thank you, Mr. Chairman.

As indicated earlier, I am representing the Chemical Manufacturers Association in my capacity as a current member and former chairman of its distribution committee. To reiterate and to refresh your memory, CMA is a nonprofit trade association whose members represent more than 90 percent of the productive capacity of basic industrial chemicals within the United States. We certainly appreciate being given the opportunity to express the chemical industry's comments on hazardous materials transportation safety and in those areas where Federal legislative amendments have been proposed.

At the outset, it is important for the record to show that the existing legislation has served our Nation well in promoting the safe transportation of hazardous materials. Congress charged the Secretary of Transportation with the duty to establish a comprehensive regulatory and enforcement program to protect our citizens against the risks inherent in the transportation of hazardous materials. The Secretary, in cooperation with State, and local governments and industry, has done a laudable job of carrying out this mandate. Over 99.9 percent of hazardous materials shipments arrive without incident, and the majority of the incidents that do occur are very minor in nature.

The chemical industry believes the safety record is good. However, it can and must be improved, and we would support some legislative changes to accomplish the necessary improvements. Specifically, we believe there is a need to clarify the roles of Federal, State and local authorities in regulating the transportation of hazardous materials. This clarification should result in greater uniformity of regulations, which will reduce confusion and conflicts. This clarification of roles should also include an expansion of DOT's preemption powers over the classification of materials, packaging, and labeling standards, the reporting of material releases, and the design, fabrication, and use of containers.

It is also important that the DOT be vested with the necessary authority and responsibility to maintain regulatory consistency with appropriate international standards. CMA also believes in and would support a limited registration program for shippers and handlers of especially hazardous materials, specifically those people involved in the shipment and distribution of class A and B explosives, materials that are toxic by inhalation, and highway controlled quantities of radioactive materials. In addition, CMA supports a Federal permit requirement for motor carriers that transport these materials. Any fees associated with the registration or permit program should be limited to an amount needed to cover the cost of administering such a program.

CMA also supports the identification of routes for the transportation of hazardous materials. The determination of these routes should be based on clearly defined Federal guidelines to be used by the States in making their route determinations. The guidelines should be based on statistically sound risk assessment practices that would allow distinctions between levels of materials hazards, accident frequencies, container integrity, and population exposure. DOT should be empowered to resolve all interstate conflicts that would arise as a result of routing restrictions.

CMA and its member companies are dedicated to improving the ability of emergency responders to deal effectively with releases of hazardous materials, and will continue to maintain a leadership role in providing training and assistance to emergency responders. Over the last 2 years alone, over 230,000 emergency responders have taken advantage of CMA's library of training materials. In addition, successful programs, such as the chemical industry's CAER program, have assisted thousands of communities in planning and preparing for hazardous materials incidents.

There is no doubt that there is still a great deal of uncertainty about the existing state of readiness of responders, the specific needs of communities around the Nation to meet the risks of hazardous materials incidents, and the training currently available and, by all means, the level of funding that exists to support these training needs. Prior to the establishment of any Federal fund for training emergency responders, CMA believes the Federal Government must answer three basic questions:

What specific goals must be met by the emergency response training program to satisfy the requirements of a coordinated national hazardous materials emergency response effort?

Secondly, what is the real assessment of the training needs to satisfy the goals of the emergency response effort? We think a mechanism under title III has already been established to collect much of this data.

And, thirdly, where should emergency response resources be located to fulfill the needs of the Nation's response effort? CMA supports a national coordinated effort to analyze hazardous materials transportation data on a regional basis for bulk placarded loads, to determine the appropriate level and placement of response resources.

I should also mention that the pilot program which has been developed in the State of Virginia, is an excellent example of how a state has gone about answering the three specific questions that we have posed.

In addition to training and an organized national response effort, a critical part of any hazardous materials response is the availability of timely and accurate information and expertise on how to properly deal with hazardous materials releases. This information has been readily available through CMA's Chemical Transportation Emergency Center, CHEMTREC. CHEMTREC has been instrumental in providing product-specific information to emergency responders throughout the United States and Canada for over 16 years.

CHEMTREC is far more than an answering service. CHEMTREC provides the essential direct communications link between the emergency responder and the appropriate chemical shipper or manufacturer for the necessary technical assistance during a response. CHEMTREC also provides the link that activates industry response teams to supplement the public responders on the scene of the incident.

Since its inception 16 years ago, CHEMTREC has incorporated several major technological enhancements. Among them are information storage and retrieval for over 300,000 chemicals and trade name products that has been completely automated, making it the largest computer-based repository of information about chemicals and trade name products in the United States.

Since 1986, CHEMTREC has had the capability of transmitting chemical emergency information by computer to responders at an accident scene. CHEMTREC can also link foreign language translation capabilities to the scene to assist in releases involving international shipments of hazardous materials.

These enhancements, among many, coupled with its vast chemical reference files and its ability to link chemical experts to the accident scene, makes CHEMTREC the most valuable and reliable emergency assistance center available in the world. Indeed, many other countries either have or are in the process of setting up emergency response centers patterned after CHEMTREC.

In testimony before this subcommittee, several misleading statements have been made regarding the value of CHEMTREC. We wish to respond to these statements by calling to your attention our track record. CHEMTREC has provided technical assistance to emergency officials at over 37,000 transportation emergencies involving hazardous materials since 1971. These emergencies ranged from paint spills on loading docks to major train derailments like the one that occurred two summers ago in Miamisburg, OH.

Our commitment in all of these cases has been the same: Gather the facts and provide the necessary technical information to aid emergency officials in dealing with the problem. Our formal response to the comments made at these hearings will be submitted to you as part of our written statement for the record.

We also would like to extend an invitation to you, Mr. Chairman, members of the subcommittee, and your staff to visit the CHEMTREC facility here in Washington to see how it operates and to experience the value of this important resource for emergency officials.

CMA also believes that a strong and effective enforcement program is necessary to support the current and amended legislation. The resources available to DOT must be expanded to ensure uniform and informed enforcement at all levels of government—Federal, State, and local. Much of the Federal role should be focused on the training of State and local enforcement personnel to ensure consistent compliance with the legislation.

In conclusion, we support minor legislative revisions to the HMTA. I must stress, however, that these revisions will only provide a part of the desired safety improvements. We also support expanded resources for DOT to step up enforcement activities, providing another part of the desired improvements. The final part of the desired safety improvements will only come from a concerted effort to expand industry participation in industry programs to work with Federal, State and local authorities and provide a true nationally coordinated hazardous materials emergency response effort.

I thank you, Mr. Chairman.

Mr. Anderson. Well, thank you, Mr. Jacobson.

Paul Rankin, you support instituting a nationally coordinated hazardous materials emergency response program. Do you have any suggestions on how such a program could or should be funded?

Mr. Rankin. Funding for an emergency response program is an issue that has been addressed by panelists all day long, and have expressed to you a range of concerns regarding selection of a single funding source. As you know or may not know, HMAC is comprised of, has members of virtually all different aspects of the transportation industry; and therefore, I have to juggle numerous interests in attempting to answer this question. All modes are represented. Generally industry has a problem developing an exact or precise methodology for funding any kind of a system.

In my capacity as secretariat of the Hazardous Materials Coalition which Mr. Harvison mentioned earlier, I found that we were unable to develop a consensus within industry concerning funding for, a national program for emergency response activities. As a representative of that diverse a group. I would have to say that the only, that the Federal Government should appropriate action initiate is a program which would encourage State and local governments, be it coordinated at the Federal level or farmed out to the States, to develop the kind of information that would provide back to you data specific to the absolute needs and funding requirements of state and local emergency responses.

At this point in time there is no information, to my knowledge, that will tell you exactly what the state and local training on equipment needs are, what the funding needs are and what the costs would be for developing such programs. Until this kind of data is developed, it is virtually impossible to comtemplate implement; or funding such a program.

Mr. Anderson. Thank you.

Mr. Jacobson, do the shippers of chemicals now have accurate information on the origin, destination, and routing of all or any of their products?

Mr. JACOBSON. We have accurate information on the origin and we have accurate information on the destination of all products. With respect to routing, let's start with rail shipments. Rail shipments which travel along prescribed routings are well controlled and well known. In fact, most of us are capable of tracking the movement of rail chemical shipments within a matter of hours, by location, throughout the United States.

Bulk truck gets a little bit more difficult to track because they travel along prescribed routes, but they can vary depending upon the level of highway construction and other things that might occur between someplace like Texas and Pennsylvania. On the other hand, when you get down to packaged goods shipments which can travel by truckload or less than truckload means, it is quite difficult because you can go city by city, but you can't say that it goes on this particular highway, through this county or that township on the way. However bulk placarded quantities, in general can be tracked.

Mr. ANDERSON. My next question was, if you have that information, and apparently you do, have you or the chemical industry made that information available to State and local governments for their planning and training purposes?

Mr. JACOBSON. We are making this information available to the State and local planning agencies through the Title III organizations and also through our own Community Awareness and Emergency Response (CAER) programs where we are trying to develop the response capabilities and the emergency planning capabilities within the communities surrounding our fixed facilities, so we do reveal what is coming in, what is going out, how it is being transported, and the quantities, and set up plans to address incidents.

Mr. ANDERSON. My next question would have been, if they do not have that information, how long do you think it would take to compile it, but apparently you do have it, so the compiling of it so that you can give this information out to local governments would not be that difficult, would it?

Mr. JACOBSON. No, it would not, and that is why we have supported, in our testimony the concept of a pilot program to evaluate the routing of bulk placarded materials. That information would be relatively easy to collect.

Mr. ANDERSON. Now the Chemical Manufacturers Association has an emergency response training program, and apparently you offer training to emergency responders in the public sector. How do you decide who needs to be trained, and who decides how much training is needed for various groups of emergency responders?

Mr. JACOBSON. Basically, the CMA and its member companies get involved in three levels of training. First there is a CMA-sponsored hands-on training program which has been traditionally directed towards chemical industry personnel, which is teaching them how to deal with leaking containers, leaking tank trucks, how to deal with chemical fires, things of this nature, at an incident scene. Recently, again through the title III programs and through the Community Awareness and Emergency Response programs, many chemical companies have been inviting public sector responders as their guests to these training programs at industry expense.

There is another level of training which is nonrestricted, no charge to public sector responders, through our lending library. CMA has collected a variety of what we think are high quality training videotapes, acquired many copies, and placed them in our library in Washington, and they are made available with no discrimination to public sector personnel, free of charge.

The third level of training is member company direct training of fire companies, and police departments, again in the areas located around our facilities, through the CAER program or through other programs that we conduct. On request, we will take some of these training programs and these training efforts on the road to parts of the country that might not have chemical facilities located in their back yards.

Mr. **Anderson**. Mr. Applegate?

Mr. **Applegate**. Thank you, Mr. Chairman.

It is getting late in the day and my throat is getting a little sore. I appreciate you gentlemen coming in. I don't think I will ask you if you have read my bill. I'm sure that you have.

Mr. **Anderson**. In the last half hour.

Mr. **Applegate**. In the last half hour?

[Laughter.]

I'm sure they read it before that. They probably know it very well.

I know that you don't like my bill, and I think your system is inadequate, but I have just a couple of questions: I heard you mention, and I think it was Mr. Jacobson, that you have accurate information on origin and destination.

Mr. **Jacobson**. Yes, we do.

Mr. **Applegate**. Well, what about predestination dumping or midnight dumping? What happens? You know, it's all right when it leaves and it's OK perhaps when it gets there, but there are a lot of times it doesn't get there, and I don't know that you have anything in your system that we would have in ours if it was implemented.

Mr. **Jacobson**. Well, I can talk about the procedures that are in place at most chemical companies. There is no CMA-mandated program that says, "This is the way you must behave," but if it is a chemical waste that is manifested, we demand basically a returned manifest that certifies what has happened to that material.

Again, how do you handle the midnight dumpers of hazardous waste? I think they are going to evade whatever system you have in place or whatever practices you have in place. The key is, as responsible members of the chemical community, we don't use people that engage in those types of practices.

Mr. **Applegate**. Well, I understand that. Now on the manifests I know that there are times, and it has happened, because we have had testimony from some people that we have talked to where in the instance of Miamisburg—again, we could use that and some others—where they refused to turn over the manifest. I know that is not a concern of yours, but with my system they wouldn't have to. They could access it and they would have all the information that they would need.

Mr. **Jacobson.** Well, my recollection of the incident in Miamisburg is that it was not a case of refusal to turn over the train consist, but was a case of only one copy of the consist being available and the train master didn't want to give it up. He was happy to give information to people from that consist, but that is a different issue. The revision and the modification of the train consist system has been changed by many railroads since that incident.

Mr. **Applegate.** Yes. I just know that from—I mean, what I know is that the fire chief said flat out that he could not get the information that was necessary. He could not get to see the manifest, so he really didn't know.

Let me say here that in your testimony, that CHEMTREC provides expert guidance to the accident scene on how to deal properly with a chemical release. CHEMTREC can directly contact over 3,000 chemical shippers whose products may be involved in an accident, and patch the on-scene emergency respondent directly through to the shipper.

The problem is that, you know, what kind of a timeframe are we talking about. We are not talking about anything instantaneous, obviously. I mean, somebody has to go to a telephone and call, if there is a telephone available, and if there isn't a telephone available, I don't know what you do, and of course you have to know what the chemicals are involved.

Mr. **Jacobson.** That is not necessarily true. Typically a highway patrolman or a fireman would radio his dispatcher and the dispatcher would place the call through to CHEMTREC, patch it through that way. In the case of the Miamisburg incident—and I have heard some times begin thrown out here today about hours required to identify materials—the fact of the matter is that in the Miamisburg incident there was no identification of the material and somewhere under 8 minutes was required for CHEMTREC to identify that material by calling, the car manufacturer, utilizing the serial number on the car, finding out who the shipper was, and contacting the shipper and finding out what the material was.

Now that was with respect to the placarded white phosphorus in that train shipment. Supposedly there was another car that it has been reported took 10 hours to identify. I want to remind people that that car contained sulfur, which at the time of the Miamisburg incident was nonregulated, therefore was not classified as hazardous, and under any system that would not be picked up. To our knowledge, no request was made to identify that car until several hours after the incident occurred.

Mr. **Applegate.** It was my understanding with that incident that it wasn't so much identifying what was on the train but where it was. Right?

Mr. **Jacobson.** I don't recall that exactly, sir. That could be true.

Mr. **Applegate.** Yes. That was what it was, and it took them 10 hours to be able to find the location of it, which cars.

Mr. **Jacobson.** Well, again because the sulfur material was a nonregulated material, it was not listed on the consist. Many consists at that time did not contain a listing of the nonhazardous materials.

Mr. **Applegate.** And there was the incident on the beltway where the dry cleaning truck overturned, flipped over, and there was a spill, and they didn't know what it was. Apparently it took them 4 hours before they were able to determine that it was a substance that wasn't necessarily dangerous, but they didn't know that for 4 hours. You are probably familiar with that one, too.

Mr. **Jacobson**. Well I, don't know if you would have any information on a dry cleaning truck in any system. That would be—certainly a dry cleaner is not a member of the Chemical Manufacturers Association and probably would not be registering and identifying his products with CHEMTREC, and I am sure in this particular case his load was not even identified as hazardous.

Mr. **Applegate**. CHEMTREC is operated—these are your words—by CMA as a public service to provide detailed technical information and an expertise to emergency response officials dealing with hazardous materials transportation emergencies, and you talk about high quality training, and you have tapes made available, and that you work directly with direct training programs for firefighters and police and all this and that. Let me ask you this: Why are the firefighters opposed to the CHEMTREC system and calling for an end to it? I mean, if it is so good, these are the people who are the ones who have to respond to it before anybody else, unless somebody else just happens to get there before they get there. They are the ones that put their lives on the line.

Mr. **Jacobson**. I can't answer why the International Association of Fire Fighters is opposed. I can say that the International Association of Fire Chiefs, the National Volunteer Fire Council, and the International Association of Police Chiefs do support, endorse, and use CHEMTREC, and they are the incident scene commanders that are making the calls in to CHEMTREC and getting the information. As to the direct allegations or the direct objections of the International Association of Fire Fighters, I have only read their testimony at this particular hearing.

Mr. **Applegate**. Yes. Well, I understand that the chiefs have not said anything or haven't come out for my bill, but the guys on the front line have, so I guess we can find out from the firefighters if we can get a response from them on that.

That is really all I have right now, Mr. Chairman. Thank you.

Mr. **Anderson**. Mr. Grant.

Mr. **Grant**. Thank you, Mr. Chairman.

Mr. Jacobson, what about intracompany shipments?

Mr. **Jacobson**. Intracompany shipments?

Mr. **Grant**. Intra, where you had companies shipping from one division to another, would those be placarded?

Mr. **Jacobson**. Yes, they are very tightly controlled.

Mr. **Anderson**. Intrastate?

Mr. **Jacobson**. Intracompany.

Mr. **Grant**. Intracompany.

Mr. **Jacobson**. In our company, for example, the major portion of our hazardous materials shipments are intracompany, because we manufacture our hazardous monomer products in Texas and transport them to Pennsylvania, Kentucky, Tennessee, and California.

Mr. **Grant**. They would be placarded, though, so——

Mr. **Jacobson**. They are placarded, and the major portion of our outgoing shipments to our customers are nonhazardous polymers, but intracompany shipments are probably monitored and tracked much more closely than shipments to customers.

Mr. Grant. OK, that answers that question, then. Is that coordin9.

Mr. Grant. So briefly, how the CHEMTREC system works, you put the placard on, you know where it starts, where it is supposed to finish. You do not know the route it is going to take necessarily, though. Is that correct?

Mr. Jacobson. As I said, for a packaged goods shipment traveling by LTL, you would have some doubt as to the exact route over which the shipment travels, but if it is a railroad shipment we know exactly what route it takes.

Mr. Grant. If there is a hazardous incident in my district, and a couple of years ago there was a railroad derailment and there was a hazardous gas in one of the cars or more than one of the cars, in that scenario how would CHEMTREC work? What happens, briefly?

Mr. Jacobson. Well, basically it would work this way: From the incident scene, the first person on the scene, whether it be a policeman, fireman, or in many cases—and actually to back up a little bit—65 percent of the transportation emergency calls that come in to CHEMTREC come from operating personnel. They come from the truck driver or from the train crew themselves, but anyway from the incident scene.

Utilizing information on the consist, either on the shipping papers that are available with the driver or utilizing the DOT guidebook and placards, the call would be made in to CHEMTREC, which is the 800 number, 24 hours a day, 365 days a year.

Mr. Grant. What happens if it is a driver and he is killed?

Mr. Jacobson. In that case, the person on the scene would rely upon the placard and the identification on the placard to call CHEMTREC and say, "I have trucking company such-and-such," which begins the process of identifying the shipment and providing assistance. We have had cases where the truck has been burned up, where you couldn't even identify the truck. Let me give you an example.

Years ago down in the State of North Carolina, an LTL shipment did have an accident on the highway. There was a fire from the diesel fuel in the truck. The cab was burned, the driver was killed. When the State called CHEMTREC they were able to track down the number of people that had facilities in that area and find out, based on the information on the trailer, the name of the trucking company.

We were able to track down exactly what was on that truck within a matter of hours, but it did take some time, and found that yes, it was a load of mixed material. It did contain some hazardous material. The placards had been burned up in the fire and were indistinguishable. The people on the scene were able to handle the incident successfully. The material was contained. There was no physical damage to property. There was no injury or exposure to traffic on the highway, and it was——

Mr. Grant. But then when you get the call, when you get the call or the central office gets the call——

Mr. JACOBSON. Right.

Mr. GRANT. [Continuing]. Then you notify—do you notify the nearest emergency response facility or team, or whose responsibility is that?

Mr. JACOBSON. Once CHEMTREC receives a call, then it calls the shipper. The shipper then can be dispatched directly to the scene. We can look for additional response efforts. In all probability there was a fire unit on the scene when the call came in. Then we can work through a mutual aid network called CHEMNET, in which we can get assistance from other chemical companies that are nearby. We can get assistance from contractors that are nearby, to supplement the activities of the firemen and the policemen that are on the scene.

So the objective, in a very, serious accident, is to go from the verbal expertise over the telephone to place physical eyes and ears and expertise on the scene of the incident, utilizing a combination of mechanisms depending upon the severity of the incident and the location of the incident. In some cases we can call up a railroad team because the railroad teams are quite, competent. We can call up our own chemical industry partners to assist us, or we can go to a network of third party contractors that we have under agreement to handle these incidents or to assist.

Mr. GRANT. How many calls did you receive, say last year?

Mr. JACOBSON. How many calls did we receive last year?

Mr. GRANT. Yes.

Mr. JACOBSON. Well, in a typical year CHEMTREC receives approximately 47,000 incoming calls. Now that requires a little bit of breakdown. Only about 7 percent of those calls or something like 3,300 are transportation emergencies. We receive about 1,300 medical emergencies. This is where it could be an individual in his home is exposed to a cleaning solvent and needs information on how to treat his burning eyes. We receive about—30 percent of those 47,000 calls are people just calling in, looking for information on chemical products.

Again, it is the classroom case situation. It is the person with the need to identify something that he has found in his basement. These types of calls come in to CHEMTREC. So there are about 7 percent, as I said, 3,300 are transportation emergency incoming calls, and there is a whole series of those. Usually there is one followup call, at least, for every incident. Then there is a large number of calls that come in, up to 14 percent, which are requesting information on the proper placarding of loads, compliance issues, interpretation of 49 C.F.R., and there is also a series of telephone calls that come in on disposal issues.

Mr. GRANT. But 3,300 are actual emergencies?

Mr. JACOBSON. Those 3,300 are incoming transportation emergencies, which can range from the leaking container, the small spill, all the way up to the Miamisburg, OH, type of incident.

Mr. GRANT. Do you think that CHEMTREC could be used to actually monitor the shipments, the routing, as well?

Mr. JACOBSON. Under the current charter, no. No, it could not. Number one, it is a voluntary system, and that is the key.

Mr. GRANT. If it were mandated, do you think it could handle it?

Mr. Jacobson. How far CHEMTREC could go in terms of its capabilities, if mandated, I find it very difficult to judge right now, but it is a very good question which we could take a look at.

Mr. Grant. What about your position on prenotification? Do the Chemical Manufacturers have a position?

Mr. Jacobson. We are nervous about prenotification. Again, depending upon the classification of hazard and the volume of material being shipped, the question could get simpler, but to just talk about prenotification of hazardous materials, it is rather frightening.

Mr. Grant. If it were extremely hazardous, you would have no opposition to that, I am sure, would you?

Mr. Jacobson. I think that is a fair statement. I think you would find, for the chemical industry companies that are dealing with extremely hazardous materials, you will find some very, very sophisticated and complex procedures for transporting those materials are in place.

Mr. Grant. All right. Thank you, Mr. Chairman.

Thank you, sir.

Mr. Anderson. Mr. Applegate, do you have another question?

Mr. Applegate. Just one. Mr. Jacobson, how do you respond to the Office of Technology Assessment when they say that 50 percent of the placards which you talk about are unidentifiable through various means? You may have answered it in part, but through——

Mr. Jacobson. In that report I think there was reference to the fact that 25 to 50 percent of loads are improperly placarded. Now I think that even included placards that were obscured by dirt, scratched, and not painted, so how many of them were actually placarded wrongly, stating it was a corrosive when it might have been a flammable, I don't know, and I can't remember if that was in the study or not.

The issue of evading, if you really are the type of shipper or carrier who doesn't want to placard your load, you are not going to placard it. As mentioned earlier, someone is going to weigh the risk of noncompliance. Our own attitude toward that is, don't do it, please don't do it. It is not being a very smart citizen if you don't placard properly.

Mr. Applegate. That's true, and I agree. With my bill, you wouldn't have to beg them.

Mr. Jacobson. We have doubts, but that is——

[Laughter.]

Mr. Grant. Mr. Chairman, could I ask just one brief question?

Mr. Anderson. Go ahead.

Mr. Grant. I forgot to ask, how is CHEMTREC funded?

Mr. Jacobson. CHEMTREC is funded through the dues paid by the members of the Chemical Manufacturers Association.

Mr. Grant. You mean everybody pays, even though it is voluntary, if they are a member of the association?

Mr. Jacobson. Well, no. The Chemical Manufacturers Association, as I mentioned earlier, comprises the companies that manufacture about 90 percent of the chemicals in the United States. In number, we are about 175 companies, and we pay dues on an annual basis into CMA.

The CHEMTREC service is available to anybody, and we do have Canadian manufacturers, we have nonchemical industry participants in the CHEMTREC system. We have other trade associations that utilize the CHEMTREC system, and I think that is the thing that you should remember, is that the Chlorine Institute, the Petroleum Institute, all of these people participate in the CHEMTREC program, even though it is supported and funded by CMA only.

Mr. **Grant**. Thank you.

Thank you, Mr. Chairman.

Mr. **Jacobson**. Before we get off that subject, again I am serious about extending the invitation to come and visit the CHEMTREC facilities. It is not that far away and I guarantee, based on the level of telephone calls coming in, you will see the way they handle incidents, minor and hopefully none major, but at least you will see what is available to the people, the way they can communicate with a number of people at the scene.

I can't emphasize enough the fact that we can pull together expert after expert into one telephone conversation, ranging from—and we have done this just recently, in fact last week in a case in Jackson, OH, which was a formaldehyde spill—25 gallons of formaldehyde out of a Chemical Leaman tank truck. The call came in from the Chemical Leaman driver through CHEMTREC, and by the time the incident was over they had patched together hospital personnel who did not know how to handle exposure to formaldehyde, they had patched them in with medical personnel at the manufacturer of the formaldehyde to get information on how to decontaminate the people that had been exposed, how to decontaminate the equipment that had been exposed, how to clean up the incident and seal up the truck and get it back on the road again in a relatively short period of time.

So that was an ideal case of a nonincident because it was a splash from a dome on a tank truck, but there was a case of traffic that drove through the formaldehyde, and all of the people were tracked down and found and treated in a hospital.

Mr. **Anderson**. OK? Well, thank you, then, Mr. Rankin and Mr. Jacobson, for an excellent presentation.

[The prepared statements of Mr. Rankin and Mr. Jacobson follow:]

Statement of the

Hazardous Materials Advisory Council

Before the

Surface Transportation Subcommittee

Public Works and

Transportation Committee

United States House of Representatives

on

"The Hazardous Materials Transportation Act"

May 25, 1988

Mr. Chairman, I am Paul W. Rankin, Managing Director of the Hazardous Materials Advisory Council. HMAC's membership consists of corporations, firms and associations that are involved in the shipment and transportation of hazardous materials, substances and wastes. It is the only national organization devoted to promoting safety in the domestic and international movement of hazardous materials which represents all modes of transportation, shippers, container manufacturers, reconditioners, emergency response and waste clean-up companies, as well as carrier and shipper associations.

HMAC is pleased to have the opportunity to present testimony on legislation to amend the Hazardous Materials Transportation Act (HMTA). We believe that one of the bills before the Subcommittee, H.R. 4069, deserves your special attention because, with only minor exceptions, it offers a set of proposals that are well-reasoned, and when enacted, will result in a positive and substantive advancement of the law.

The Hazardous Materials Transportation Act, now almost fourteen years old, has proven to be a durable, and flexible law. It has contributed greatly to safety improvements in the field of hazardous materials transportation and permitted the development by DOT of an extensive and effective regulatory regime.

Nevertheless, in many respects the HMTA is beginning to show its years. There are questions within industry concerning the scope and applicability of the statute in such key areas as, for example, route selection, enforcement, regulatory preemption and permitting.

However, alone among the many bills before the Subcommittee, H.R. 4069 is a concise and somewhat innovative attempt to resolve or at least clarify the central legal and regulatory issues associated with hazardous materials transportation. The bill preserves the essential structure of the existing law while strengthening the ability of DOT to promote the safe transportation of hazardous materials. Specifically, the bill:

° Improves the process by which determinations of federal preemption of state and local laws and regulations are made; and

° Establishes a sound process for the routing of hazardous materials, including the resolution of disputes arising from such process;

° Requires permits for carriers of certain high hazard materials;

- Promotes domestic and international regulatory uniformity; and
- Extends DOT regulatory authority to intrastate movements of hazardous materials.

I will address these and several additional points in my testimony.

Preemption

The process of regulating the movement of hazardous materials is and must continue to be shared among local, state and federal authorities. This fact is acknowledged explicitly in the statute at Section 112(a) wherein state requirements which are consistent with the Act are not preempted if certain findings are made. (See also Section 107.209(c) of Title 49, Code of Federal Regulations.) In addition, more than 20 administrative decisions have been made and several court cases decided that have further defined the relationship between the various levels of government. Nevertheless, the boundaries of this inter-governmental relationship are not precise and therefore are the subject of continuing controversy and in some cases protracted litigation.

H.R. 4069 would help to rectify this situation in several ways. The bill would mandate that the Secretary of DOT issue regulations governing specified aspects of hazardous materials transportation, whereas now that authority is permissive. It would enumerate specific subject areas such as shipping documentation, equipment standards, etc. and reserve their regulation exclusively to the federal government. I should note here that in the enumeration section of the bill there was an inadvertent exclusion of the term "manufacture" [of packagings] from those subjects preempted by the Federal government. This oversight should be corrected in the legislation. Finally, the bill would extend DOT regulatory authority to all intrastate movements of hazardous materials. Currently, DOT authority in this area is highly restricted. HMAC strongly supports each of these new provisions.

In addition, HMAC notes that the broader preemption afforded the railroad industry under the Federal Railroad Safety Act, as well as the HMTA, is not addressed by this legislation.

The proposed amendments also would revise extensively the process by which state or local requirements affecting hazardous materials transportation are reviewed for consistency with the

Act. HMAC supports this effort because there is presently no statutory definition of what is "inconsistent," there is no requirement mandating initial Federal review of potentially violative State or local laws, and there is no requirement that a Federal inconsistency decision be adhered to.

To improve the existing review process, H.R. 4069 would mandate preemption of non-Federal requirements if any of the following three standards apply: 1) compliance with both the State or local requirement and the HMTA or Hazardous Materials Regulations is not possible; 2) if the State or local requirement is an "obstacle to the execution" of the HMTA and the HMR; or, 3) if the state or local requirements conflict with any subject preempted under Section 2 of the proposed bill.

A new statutory preemption determination process would greatly improve the system by limiting parallel appeals (judicial and administrative) and imposing a decision deadline of 180 days on the Secretary. Finally, the proposed legislation would ensure that an administrative decision made in accordance with the Act would be fully considered in any judicial review of the matter.

Highway Routing

The existing HMTA permits DOT to regulate the routing of hazardous materials. In fact, the agency has already exercised this authority relative to the transportation of certain radioactive materials by highway and has recently issued a proposed rulemaking to consider routing of non-radioactive hazardous materials. H.R. 4069 would clarify the Departments role in the development of standards for states wishing to control the selection of highway routes that hazardous transporters may take, and would establish an administrative process for resolving disputes between states over legally developed but conflicting routing actions.

HMAC strongly supports both the clarification of DOT authority to regulate the highway routing of hazardous materials through the development of performance standards and the establishment of a formalized process for the administrative resolution of interstate routing conflicts. We urge that the process of state selection of highway routes provide for the participation of all interested parties, including shippers and carriers.

Permitting

The DOT does not now have authority under HMTA to establish a permitting program for hazardous materials transporters. H.R. 4069 would change this situation by requiring motor carriers and motor private carriers transporting certain high hazard materials to obtain a Federal permit from the DOT. HMAC has in the past opposed permitting programs, however, we are prepared to support the limited program called for in this bill so long as the standards of compliance are reasonable, the application process is fair, the filing fee does not exceed the administrative cost of issuing the permit, and parallel state permitting programs are not allowed.

We are concerned that the legislation makes reference to a heretofore undefined subset of hazardous materials designated "extremely toxic by inhalation" the transport of which would require a permit. We do not understand this reference but assume it is simply a drafting error and should be corrected to read "poison inhalation hazards". These materials have been specifically identified by DOT as representing an acute hazard to human populations.

Proposed Section 3 of H.R. 4069 would, among other provisions, prohibit shippers from offering hazardous materials to carriers not in possession of a "valid safety permit". As written, the section appears to place upon the shipper the onus for determining the validity of the permit.

HMAC opposes this requirement as it could be construed to force the shipper to determine without assistance the actual validity of a carrier's permit -- a difficult problem in the best of circumstances. We suggest that this provision be revised to require carriers to present to shippers a valid permit issued by the DOT.

This same section would permit the Secretary to "amend, suspend or revoke a safety permit immediately without the opportunity for a hearing". HMAC contends that this language would constitute a denial of due process rights to the permit holder. We agree that the Secretary must have sufficient power to halt immediately overtly hazardous transportation activity, but to deny the affected party a hearing following such an action makes no sense. Therefore, we urge the Subcommittee to ensure that provision for an administrative hearing within a reasonable time following the revocation of a valid safety permit is made in the law.

Enforcement

The proposed amendments would significantly revise the legal standard under which the Department must determine whether a civil penalty may be imposed on a party considered to be in violation of the Act by eliminating the term "knowingly" from Section 110. HMAC strongly opposes the proposed deletion of the word "knowingly" from the HMTA. By deleting this word, the statute would impose strict liability and would automatically subject a party to penalties regardless of circumstances and without exception for inadvertent or mistaken behavior.

The bill would also revise the existing definition of the term "imminent hazard". Eliminated would be the requirement that there be a "substantial likelihood" that serious harm will occur before the Secretary may restrict or suspend transportation activity. The new definition would require only that there be "some potential" that serious harm will occur.

The new definition is unnecessarily broad and, moreover, we are unaware of occurrences in which the application of the existing standard has prevented the Secretary from swiftly taking action where necessary. Therefore, HMAC supports retention in the law of the existing definition of the term "imminent hazard".

Emergency Response

The proposed legislation does not address the subject of emergency response. HMAC believes, however, that it is essential for both Federal and state governments to take action that will lead to the development of a nationally coordinated hazardous materials emergency response program. Such a program should include state identification of regional hazardous materials emergency response teams from the public sector and their capabilities. Additionally, a mechanism for providing appropriate training should be developed.

As this process develops the federal government, in cooperation with interested parties, should develop a model program that states could use in establishing a statewide network of public emergency response teams. States should then be encouraged to support these teams and coordinate with neighboring states to reduce duplicative activities. In addition, the model program should promote the use of a single national telephone number to which hazardous materials incidents of all types may be reported.

In conclusion, HMAC feels strongly that H.R. 4069 is sound legislation that will, when enacted, improve and make more effective the central Federal law governing the safe transportation of hazardous materials.

Thank you for this opportunity to testify.

CHEMICAL MANUFACTURERS ASSOCIATION

WRITTEN STATEMENT OF
THE CHEMICAL MANUFACTURERS ASSOCIATION

BEFORE THE
SUBCOMMITTEE ON SURFACE TRANSPORTATION
OF THE
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
UNITED STATES HOUSE OF REPRESENTATIVES

REGARDING
HAZARDOUS MATERIALS TRANSPORTATION SAFETY

MAY 25, 1988

2501 M Street, NW • Washington, DC 20037 • Telephone 202/887-1100 • Telex 89617 (CMA WSH)

I. Introduction

The Chemical Manufacturers Association (CMA) welcomes the opportunity to present its views on the reauthorization of the Hazardous Materials Transportation Act (HMTA). CMA supports the reauthorization of the Hazardous Materials Transportation Act, and believes that improvements in the HMTA will enhance the safe transportation of hazardous materials.

CMA is a nonprofit trade association whose member companies represent more than 90 percent of the productive capacity of basic industrial chemicals in the United States. These chemicals are essential to the U.S. economy and the nation's international competitiveness. The industry's products contribute to the current high standard of living in this country. The chemicals developed by CMA's member companies are used to produce a wide range of essential products, from a food supply that meets not only the needs of this country but also helps feed developing nations, to automobile parts, clothing, and household products.

The efficient transportation of these chemicals is an essential part of the production chain. The safe transportation of these chemicals, however, is paramount. For this reason, CMA's member companies have invested hundreds of millions of dollars in developing equipment and work practices to reduce the possibility of a transportation accident involving hazardous chemicals. These efforts have resulted in an impressive safety record. Over 99.9 percent of the hazardous materials shipments made annually in the U.S. arrive without incident. The vast majority of the incidents that do occur are minor in nature.

II. HMTA Reauthorization Issues

CMA and its member companies have been active participants in the reauthorization of the Hazardous Materials Transportation Act.

CMA representatives participated in the 1986 Office of Technology Assessment research project on transportation safety, and a CMA representative was initially part of the Department of Transportation (DOT) National Hazardous Materials Transportation Advisory Committee

CMA agrees with many of the findings and recommendations of these groups on how the Hazardous Materials Transportation Act should be amended to improve the safe transportation of hazardous materials. CMA believes it is essential that the roles of federal, state and local governments in regulating transportation to be clearly defined. CMA also believes that state and local hazardous materials transportation regulations should be as uniform as possible. Such uniformity is presently lacking, and the multitude of differing, and sometimes conflicting, regulations makes compliance and enforcement difficult and only diminishes overall transportation safety.

It is important that state and local governments actively participate in the regulatory process. Their involvement is essential for maintaining safety. One of the major criticisms of the federal government is that it lacks the capability to enforce adequately the existing safety requirements on the transportation community. Improved enforcement of existing regulations should be a major goal of the HMTA reauthorization process. Of course, federal enforcement alone cannot ensure compliance with federal safety rules. The addition of nearly 150 federal safety inspectors within DOT has certainly improved the situation, but we believe that more state and local involvement will add tremendously to transportation safety. By adopting the federal hazardous materials safety requirements, and lending their enforcement abilities to that of the federal government, state and local officials can significantly improve transportation safety.

State and local involvement is also essential in the routing of hazardous materials traffic. The federal government cannot by itself designate the optimum route through a given community. However, the federal government should establish guidelines for states and communities to use in selecting routes. If a dispute arises, the federal government should have the primary authority to determine whether a state or local route plan is consistent with the federal guidelines.

There is legitimate concern about the need for training emergency responders. However, little has been done to quantify the actual emergency response training needs of local communities. DOT and the Federal Emergency Management Agency conducted an analysis in 1986, but they acknowledged that their assessment was just a beginning, and that more information is needed.

Without question, emergency responders should be trained to handle incidents involving hazardous materials. The chemical industry has taken a lead role in addressing this emergency response training need through programs such as CMA's National Chemical Response and Information Center and the Community Awareness and Emergency Response program. Other industries and organizations are also contributing to the emergency response training effort.

CMA strongly believes that an assessment must be conducted of regional hazardous materials movements, of what emergency response capabilities exist, and where there may need to be better deployment of existing resources. In addition, an inventory of existing emergency response training facilities should also be compiled. Only with this assessment will it be possible to determine if additional resources are needed and, more importantly, how to establish a coordinated national hazardous materials response program.

There is a mechanism presently available to develop information on existing resources. Under the provisions of Title III, the Emergency Response and Community Right-To-Know Act of 1986, states are required to form state emergency response commissions and local emergency planning committees. CMA believes that a basic objective of these state and local groups should be to analyze the emergency response preparedness of their states or regions.

Another major area of concern is the registration of shippers, carriers and handlers of hazardous materials. CMA believes in and would support a limited registration program for especially hazardous materials. Specifically, those involved in the movement of Class A & B explosives, materials that are toxic by inhalation and highway controlled quantities of radioactive materials should be subject to registration. In addition, CMA supports a federal permit requirement for motor carriers that transport these materials. Any fees associated with a registration or permit program should be limited to an amount needed to cover the cost of administering such a program.

III. Industry Initiatives

The chemical industry is committed to preventing accidents involving hazardous materials. Some examples of the action taken by the chemical industry to ensure the highest level of transportation safety include the refitting of rail tank cars with head shields, shelf couplers, bottom outlet protection, and thermal jackets. CMA's members have also actively participated in the Motor Carrier Safety Survey program. This program is designed to provide a means for chemical shippers to audit the effectiveness of motor carrier safety programs. Areas being reviewed, on an individual basis by shippers participating in the program, include: carrier safety commitment and performance; driver qualification and training; equipment safety; and the carrier's emergency response capability. CMA is currently expanding this program to focus on the warehousing industry's commitment to the safe storage of chemicals. CMA has also joined resources with the Association of American Railroads to develop a detailed tank car inspection training series.

Despite these efforts, factors which are beyond the control of industry or government can lead to an unintentional release. To prepare for such occurrences, CMA members have developed several safety initiatives. Two of the most significant are the National Chemical Response and Information Center and the Community Awareness and Emergency Response (CAER) program.

Through CMA's National Chemical Response and Information Center, the chemical industry provides emergency responders with several important resources. There are four parts to this program -- CHEMTREC, CHEMNET, First Responder Training, and the Chemical Referral Center. The first three parts are tailored specifically to meet the needs of emergency responders.

CHEMTREC, the Chemical Transportation Emergency Center, is operated by CMA as a public service to provide detailed technical information and expertise to emergency response officials dealing with hazardous materials transportation emergencies. CHEMTREC has operated 24 hours a day, 7 days a week, since 1971 as the key communications link for hazardous materials incidents. CHEMTREC contains emergency information on over 300,000 chemicals and trade name products. Through its 24-hour hotline and its contact with industry experts, emergency response teams, and mutual aid associations, CHEMTREC provides expert guidance to the accident scene on how to deal properly with a chemical release. CHEMTREC can directly contact over 3,000 chemical shippers whose product may be involved in an accident, and patch the on-scene emergency responder directly through to the shipper (or other necessary parties) by means of a telephone bridging capability. This enables emergency responders to obtain additional, direct assistance that enhances the response and clean-up process. With CHEMTREC's recent computerization of its data bases, emergency responders at an accident scene can receive a hard copy printout of hazard and response information concerning the products involved.

CHEMNET is the chemical industry's mutual aid response network. It is designed to provide expert assistance at the scene of an accident that involves one of CHEMNET's 101 chemical manufacturers. There are 252 chemical emergency response teams available throughout the country to render technical assistance to local emergency responders through CHEMNET. This mutual aid program is unique in that it is composed of representatives from both the chemical industry and commercial emergency response firms. When a call comes into CHEMTREC about an accident that does not involve a CHEMNET member, the communicator can, in addition to providing technical assistance, inform the caller about the availability of commercial chemical emergency response contractors in the area.

The third component of the National Chemical Response and Information Center is CMA's first responder training programs. Because the initial response to an accident involving chemicals is critical for ensuring that the public and the environment are protected, CMA has made a determined effort to make training programs available to first responders. Since September 1985, over 230,000 emergency responders have benefited from the information provided through these programs.

CMA has produced three detailed training videos for emergency responders, and has developed a lending library of training programs. Programs included in this lending library cover, among other areas: initial response techniques, proper response to chlorine accidents, releases of liquified petroleum gases, and effective preplanning.

CMA has also produced videotapes for training emergency responders. These cover the proper methods for identifying the chemicals involved in an accident, how to approach an accident safely, and how to coordinate a team response to an accident. CMA has just completed the development of another video to assist emergency response personnel in using the DOT Emergency Response Guidebook.

While the last component of the National Chemical Response and Information Center, the Chemical Referral Center, is designed for non-emergency purposes, emergency response personnel have benefited by its availability. By calling a toll-free telephone number, anyone in the general public can get information about chemical industry sources for health effects of particular chemicals. Since December 1985, over 20,000 people have taken advantage of this service. Many of these people were emergency responders.

CAER is designed to enhance the ability of local emergency officials to respond effectively to a chemical release. In part because of the efforts of CMA's members, the emergency response contingency plans of nearly a thousand communities have been redeveloped and tested. Additionally, local CAER programs have served as the foundation for several communities' compliance with Title III, the Emergency Response and Community Right-To-Know Act of 1986. Not only are these communities better able to respond to accidents involving chemicals, but their ability to handle other emergencies that may occur has also been improved.

IV. Conclusion

CMA believes that improved coordination is needed among federal, state and local authorities in developing and enforcing a nationally uniform hazardous materials transportation regulatory system. However, no new federal fund should be established for training emergency responders until an adequate assessment of the needs of emergency responders is conducted. Title III of the Superfund Amendments and Reauthorization Act provides the appropriate mechanism and a base of information to develop this needs assessment.

The chemical industry has demonstrated its commitment to the safe movement of hazardous materials, as well as to providing assistance to responders at accidents involving these materials, through programs such as CMA's National Chemical Response and Information Center, including CHEMTREC, and its Community Awareness and Emergency Response Program.

CMA believes that improved enforcement of existing regulations, along with certain modifications to the HMTA, will enhance the safe and efficient transportation of hazardous materials.

CMA
CHEMICAL MANUFACTURERS ASSOCIATION

William M. Stover
Vice President Government Relations

June 17, 1988

The Honorable Glenn Anderson
Chairman,
Committee on Public Works and Transportation
U.S. House of Representatives
2165 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Anderson:

The Chemical Manufacturers Association (CMA) wishes to submit for the hearing record supplemental comments to its testimony on hazardous materials transportation, given on May 25, 1988 before the Surface Transportation Subcommittee of the House Committee on Public Works and Transportation.

Please find attached the following items, submitted for the hearing record:

1. Response to questions concerning the scope and function of CHEMTREC;

2. Comments on H.R. 4069, amendments to the Hazardous Materials Transportation Act

Sincerely,

W M Stover

William M. Stover
Vice President
Government Relations

2501 M Street NW Washington DC 20037 202 887-1122 Telex 89617 (CMA WSH)

Supplement to the Testimony of the Chemical Manufacturers Association Before the Surface Transportation Subcommittee of the House Committee on Public Works and Transportation

During the May 25, 1988, hazardous materials transportation hearings before the Surface Transportation Subcommittee of the House Public Works and Transportation Committee, several questions were asked of the Chemical Manufacturers Association ("CMA") concerning CHEMTREC. The purpose of this supplemental response is to address those questions in greater detail. We have also attached a description of CHEMTREC, the Chemical Transportation Emergency Center, which is operated as a public service by CMA.

Unfortunately, the nature and scope of CHEMTREC's services have been mischaracterized in the debate over H.R. 3334. CHEMTREC is much more than a resource for product and response information on particular chemicals. CHEMTREC provides the communications link between responders at the scene of an incident and the industry experts who can provide specific, detailed product and response information. In addition, CHEMTREC is the communications link for activating industry mutual aid response networks, such as CHEMNET. Over 3,000 chemical shippers and manufacturers are registered with CHEMTREC and can be contacted 24 hours a day about an emergency involving their shipment or product. Although CHEMTREC can also transmit hard-copy product information directly to the scene, the ability to link company experts with on-scene responders who may have technical questions concerning the product or response techniques is one of CHEMTREC's most valuable services.

Another important function of the CHEMTREC system is its ability to assist in product identification. Sometimes emergency responders may not be able to identify the product involved in an accident -- because the shipping papers are unavailable or the placards are obscured. In such cases, CHEMTREC can use several methods to identify the product. For example, if the carrier is known, CHEMTREC can identify the shipper and product involved by calling the carrier. When only the tank car reporting marks are available, an examination of the Railroad Equipment Guide will provide the identity of shippers with private fleets. Tank car leasing firms are called for the lessee's name whenever leased cars are involved in an incident. This was basically the procedure followed by CHEMTREC when it was first called for product information after the 1986 derailment in Miamisburg, Ohio. Based on the tank car number it was given, CHEMTREC was able to identify the shipper and the product -- white phosphorus -- in a matter of minutes.

During the questioning, Congressman Applegate raised the issue of the International Association of Firefighters' (IAFF) opposition to the use of CHEMTREC. CMA believes that the IAFF's opposition is based on a misunderstanding of the nature of CHEMTREC. We understand that the main reason for IAFF's criticism is that CHEMTREC does not compile accident statistics, which in IAFF's view causes the number of hazardous materials incidents involving IAFF members (and thus the need for additional resources) to be understated.

In response to this criticism, it should be noted that CHEMTREC is not itself a reporting center. CHEMTREC provides product information and a link with the chemical producer for detailed technical assistance. To address the concerns of the IAFF, however, the federal government has two primary reporting systems, the National Response Center, for immediate reporting of releases, and the Hazardous Materials Information System (HMIS). These government entities are charged with maintaining incident statistics. CHEMTREC'c role is one of providing the essential information and assistance to the accident scene.

Another question was asked concerning the results of an Office of Technology Assessment report that found that between 25 and 50 percent of trucks carrying hazardous materials were improperly placarded. While there are undoubtedly instances where placards are missing or the wrong placards are on the truck, most of the cases of non-compliance included in the OTA study would not result in a failure to accurately identify the product involved in an accident.

A truck carrying prescribed amounts of hazardous materials is required to be placarded on all four sides. The Department of Transportation's requirements are very specific on the size, shape, color, and placement. A truck with only three placards is improperly placarded. A truck with a placard that is obscured by dirt or tilted on its side (a square rather than a diamond) is also improperly placarded. Or, if a placard is located too close to a ladder, the truck could be considered to be improperly placarded. In each of these cases the placards are present and emergency responders are aware of the presence of hazardous materials.

CMA strongly supports the DOT's placarding requirements for hazardous materials and wishes to stress the importance of compliance with those requirements. However, the OTA statistics should be placed in perspective, considering the types of non-compliance included in those statistics. Most importantly, the OTA study points out the need for stronger enforcement of the specific placarding requirements.

Finally, Congressman Applegate asked about a recent incident on Interstate 95 outside of Washington, D.C. involving a dry cleaning truck, and stated that it took four hours for the responders to identify the product. In fact, the product information was immediately available from the driver of the vehicle and was confirmed by the shipper within minutes.

CHEMTREC -- FUNCTIONS AND SERVICES

The Chemical Transportation Emergency Center (CHEMTREC) provides immediate chemical information, and guidance, from experts within the chemical industry. This public service is available 24 hours a day through its toll free or international number. Persons involved in a chemical incident of any magnitude, from minor leaks and suspicious odors to derailed tank cars, can and do call the hotline. Among the Center's 42,000 callers last year were truck drivers, railroad employees, fire services, hospitals, police, concerned parents and consumers.

Callers are first advised of the nature of the material, and potential hazards from inhalation, skin contact, reactivity, flammability on other properties. Step-by-step instructions are provided to deal with a spill, leak, fire or exposure. This information has two sources: a database of 4,000 "responder-friendly" chemical reports custom-developed for chemicals produced in high volume or heavily transported; and a library of more than 250,000 Material Safety Data Sheets.

CHEMTREC also makes contact with the shipper or manufacturer of the materials involved in the incident. The Center maintains a list of 24-hour contacts with over 3,300 chemical producers and shippers to do this. Liaison that the Chemical Manufacturers Association provides with experts and mutual aid associations within the industry sets CHEMTREC apart as the key communications link in a hazardous materials emergency. CHEMTREC knows who and where to call; the industry has identified special CHEMTREC contacts within their emergency response systems who are prepared at all times to receive and act upon a call from the Center.

To get the experts involved CHEMTREC often uses its custom-built communications bridging capability. With the capability to conference up to 18 individuals CHEMTREC can bring together the expertise necessary to resolve the incident. While this communication ability is invaluable during large scale incidents, it is also valuable during medical emergencies when CHEMTREC can join a poison control center or company doctor directly with the treating physician.

Occasionally there are incidents where shipping papers are unavailable. With as little information as a trailer number to go on, CHEMTREC can call the carrier and determine the identity of the shipper and product. When only the tank car reporting marks are available, an examination of the Railroad Equipment Guide will provide the identity of shippers with private fleets. Tank car leasing firms are called for the lessee's name whenever leased cars are involved in an incident. In those instances where the identity of the shipper has been obtained, but contact cannot be established, we enlist the aid of the local fire, police, and sheriff's departments for contact with the shipper. If only the product can be determined, CHEMTREC will request the assistance of another producer if the situation warrants. These firms, acting as a good Samaritan, will provide product information and advice to the incident commander. The system works because CHEMTREC knows who to contact, and how to do it in the shortest time possible.

CHEMTREC is also the nerve center for chemical industry mutual assistance pacts. Producers of specific chemicals such as hydrogen cyanide, hydrogen fluoride, phosphorus, and chlorine have banded together to provide the fastest, best response to any incident, with CHEMTREC acting as the activating mechanism.

To supplement these product-specific mutual aid systems, CMA has added its own: CHEMNET, or Chemical Network. The CHEMNET system can activate mutual aid assistance for any chemical anywhere in the continental United States and Canada. Over 250 industry and for-hire emergency response teams form a safety umbrella of expert response and specialized equipment. Chemical companies can join the CHEMNET program at no cost and enjoy the security of emergency response resources on a national basis. Again, CHEMTREC serves as the activator for CHEMNET mutual aid.

CHEMTREC's relationship with the government and other emergency response agencies has been one of mutual respect and cooperation. We have 24-hour contact with the Military Traffic Management Command (MTMC), the Bureau of Alcohol, Tobacco, and Firearms, Army EOD units and each of the military branches. All incidents involving radioactive materials are reported to the closest Department of Energy Regional Coordinating office, and the Center for Disease Control is advised of all etiological agents incidents. All incidents involving rail equipment are reported to the Bureau of Explosives (Association of American Railroads).

CHEMTREC has a close relationship with the National Response Center (NRC). The NRC is notified of all significant incidents reported to the Center, and in turn the NRC contacts CHEMTREC for product information and shipper assistance. The NRC noted in a brochure "... It is important to remember that the NRC and CHEMTREC are not in competition, but are cooperating to achieve a single purpose: the protection of the public and the environment."

CHEMTREC has kept pace with the age of computers. The Hazard Information Transmission, or HIT program, was inaugurated in 1986. This service provides fire and policeman with a computer-to-computer transmission of critical emergency response information in as little as five minutes. The transmission can be made to the actual incident scene, placing accurate information in the hands of the decision-makers.

CHEMTREC also has employed one of the first laser-optic storage and retrieval systems in the world to store and rapidly retrieve records from its huge Material Safety Data Sheet library. The system enables CHEMTREC to retrieve information within 20 seconds and gives

CHEMTREC the unique ability to obtain emergency response information on over 250,000 trade-name products. All the Center's data resources are integrated through the system. Using high resolution work stations the Watch Officer has at his immediate disposal chemical specific emergency response reports, Material Safety Data Sheets, company contact records and digital communications with emergency responders computers.

The Center has changed dramatically since it first opened in 1971. We have continued our commitment through the years, exploring and employing new technologies and dedicated staff to provide the best and fastest emergency response resource possible. CHEMTREC has assisted in 42,800 emergencies in its 16 years of operation. With adjunct programs such as mutual aid and the Chemical Referral Center, plus the CMA programs HIT and CHEMNET, and aided by the latest and best in communications and information technologies, CHEMTREC remains a vital emergency response resource.

The value of CHEMTREC's services have been recognized by a number of organizations and in a number of publications. The following partial listing provides a resource of further information and opinions about CHEMTREC.

Adams, Rich, "EMS: The Rules Changes for Haz Mat Incidents," Firehouse, p.18, July 1987.

Estepp, M.H., Prince George's County, MD, Fire Department, Fire Chief, "Remarks for 15th Anniversary CHEMTREC", September 9, 1986.

Evert, K.A., Flight For Life, Registered Nurse, Personal Correspondence to CHEMTREC Operations Supervisor, Chemical Manufacturers Association, November 4, 1985.

Ichniowski, T., "Making It Safer To Move Hazardous Materials," Chemical Engineering, pp.14-19, July 20, 1987

Keeling, A. L., City of Chehalis Fire Department, Fire Chief, Personal Correspondence to Director of CHEMTREC, Chemical Manufacturers Association, November 18, 1987.

Law, W., "Hotline Provides the Answers," Chambersburg, PA Public Opinion, December 12, 1986.

Leonard, R.B., M.D., Ph.D., "Chemicals in Transit: Be Prepared," Emergency Medicine, pp.17-32, October 30, 1984.

Mascone, D.F., "IN Case of Emergency, Call Your Nearest Chemical Plant," Chemical Engineering, pp.22-25, November 10, 1986.

McCarty, C., "CHEMTREC Hotline For Chemical Emergencies," The National Sheriff, pp.49-52, February-March 1984.

McCarty, D., "Cleanup of Gas Praised," The News, Indianapolis, IN, November 29, 1984.

"Hazards on The Road," Ohio Business, p.31, May 1985.

Resen, L., "The Community is Concerned! The Chemical Industry is Too...," The Chemical Engineer, pp.12-13, October 1986.

Ruddock, V., "Evacuation In Plant Alarm Unnecessary," Indiana, PA Gazette, July 6, 1987

Ryckman, D.W., Sc.D., P.E. Diplomat, AAEE, Rychman's Emergency Action & Consulting Team, President, Personal Correspondence to R. L. Stephens, Chemical Manufacturers Association, November 19, 1985.

Thompson, K.D., "Computers Cut Hazardous Spill Response Time," The Journal of Commerce, July 1, 1987.

Wright, C.J., Union Pacific System, Supervisor, Hazardous Materials Training, Personal Correspondence to Robert A. Roland, President, Chemical Manufacturers Association, September 13, 1984.

December 17, 1987

Comments of the
Chemical Manufacturers Association
on H.R. 4069

Overview

The Chemical Manufacturers Association ("CMA") believes that H.R. 4069 would provide several significant improvements to the current Hazardous Materials Transportation Act. The bill would help clarify the appropriate roles of the federal, state and local governments in regulating hazardous materials transportation -- which presently is a subject of considerable confusion.

H.R. 4069 would establish a permit requirement for motor carriers that transport certain highly hazardous materials. CMA strongly believes that such a permit requirement would contribute greatly to safety. The transport of explosives and poison-by-inhalation materials should be subject to heightened carrier fitness requirements, and a permit system will help ensure that those requirements are met by the carriers chosen to transport such materials. Because of the interstate nature of much of the transportation of these materials and the need for uniform standards, it is appropriate for DOT to administer the permit program.

H.R. 4069 would establish a national highway routing system for hazardous materials, which will improve both transportation safety and emergency response effectiveness. The bill would also help clarify and streamline the current procedures for determining when a state or local regulation is preempted by federal requirements. H.R. 4069 would promote a more efficient resolution of preemption disputes, which CMA believes is in the long-term interest of all involved parties.

H.R. 4069 would also require, to the extent practicable, uniformity of domestic and international regulations. CMA believes that such uniformity, as well as effective U.S. participation in the development of the international standards, is important to the continued international competitiveness of the U.S. chemical industry. In 1987, the U.S. chemical industry accounted for an international trade surplus of over $10 billion.

CMA also believes, however, that certain provisions of H.R. 4069 are unnecessarily ambiguous or cumbersome and should be modified. Also, several areas not addressed by H.R. 4069 warrant inclusion in the bill. The suggested changes and additions to H.R. 4069 are discussed below.

Section 1 of H.R. 4069

This section would revise the definition of "imminent hazard" presently contained in section 111(b) of the Hazardous Materials Transportation Act by eliminating the requirement that there be a "substantial likelihood" that serious harm will occur. The new definition would require only that there be "some potential" that serious harm will occur.

The "some potential" language is unnecessarily broad and would give insufficient guidance concerning when an injunctive remedy is appropriate. A clearer and more helpful revision would be to change "substantial likelihood" to "reasonable likelihood" in section 111(b) of the HMTA or, alternatively, to change "some potential" to "a significant potential" in the bill.

In addition, the definition of "commerce" in section 103(1) of the HMTA should be amended to reflect the authority over intrastate and foreign commerce provided for in section 2 of the bill. A possible conforming amendment would be to change the definition to read: "commerce means trade, traffic, commerce, or transportation to or from places in the United States."

Section 2

Proposed subsection (a)(4)(E) preempts "highway routing." An earlier section-by-section analysis of the bill explains that preemption under section 2 is limited to highway routing because of the "apparent infeasibility of improving safety by creating a Federal system of routing hazardous materials by rail." Conceivably, however, states could have a different view of the feasibility of rail routing restrictions and could view section 2 of H.R. 4069 as permitting state attempts to impose such restrictions. In order to avoid possible confusion on this point, "Highway routing" in subsection (a)(4)(E) should be changed to "Routing of hazardous materials."

Section 3

Proposed subsection (d)(1) provides that shippers may only offer materials for which a permit is required "to a carrier presenting a valid safety permit." This language could create problems for shippers that have been presented a permit that on its face appears valid, but has been suspended or revoked. It would be extremely difficult and inappropriate for the shipper to have to ascertain the actual validity of the carrier's apparently valid permit. In addition, the requirement that the carrier present a valid permit to the shipper each time the shipper offers a covered material to that carrier could become an administrative burden for both parties.

A preferable approach would be to provide that a carrier could not be used that has not been issued a valid permit. Accordingly, in the last line of subsection d(1), "carrier presenting a valid safety permit" should be changed to read "carrier that has been issued a valid safety permit."

Subsection (d)(3) provides that in cases of imminent hazard, the Secretary may suspend or revoke a safety permit "immediately without the opportunity for a hearing." This language arguably raises due process concerns, because it does not provide for a hearing after the Secretary's action. The following underlined additions to subsections (d)(3) and (4) would address this concern: revise subsection (d)(3) to read "... the Secretary may amend, suspend, or revoke a safety permit immediately without the opportunity for a prior hearing" and revise subsection (d)(4)(E) to read "procedures for the amendment, suspension, or revocation of a safety permit, including procedures for expeditious review of action taken in cases of imminent hazard."

Section 7

According to the section-by-section analysis of the bill, the deletion of the word "knowingly" is necessary because that term has been construed to require DOT to find a willful violation of the regulations before it can impose civil penalties on a person. Deleting "knowingly" is assertedly necessary to clarify that DOT can impose civil penalties for a negligent violation of the regulations. However, simply deleting the word "knowingly" could also have the unintended result of exposing persons who have acted non-negligently to possible civil penalties. A better approach to solving the problem of the correct interpretation of "knowingly" would be to clarify its meaning in the statute. This would also eliminate the confusion and ambiguity that would arise from the absence in the statute of my qualifying words such as "knowingly." This clarifying change could be accomplished by striking "knowingly commits an act" each place it appears and inserting "commits an act that person knew or reasonably should have known."

Sections 2 and 10 - Judicial Review

Section 2(c) and section 10(d) provide for judicial review in a United States district court. Under rule 15 of the Federal Rules of Appellate Procedure, petitions for judicial review of agency decisions generally must be filed with the court of appeals; it is questionable whether appeals from DOT dispute resolution or preemption decisions should be treated any differently.

Hazardous Materials Flow Data

Although H.R. 4069 does not contain any provisions relating to hazardous materials flow patterns, another recently-introduced bill, H.R. 4153, does address this subject. CMA agrees with the basic goal of H.R. 4153 and believes that the provisions of H.R. 4153 should, with certain clarifications, be incorporated into H.R. 4069.

CMA believes that information on what, where, and how hazardous materials move will assist the states and DOT in allocating enforcement and emergency response resources. However, H.R. 4153 does not specify how the information collected on regional flow data will be used. The flow data should be used to determine the appropriate level and placement of emergency response training and equipment. In addition, the universe of shipments studied should be limited to bulk, placarded hazardous materials. This will reduce reporting and data collection burdens on industry and government, and will ensure that the study focuses on those shipments that present the greatest risk of a serious incident involving exposure or environmental harm.

Emergency Response Training

Another area that is not addressed by H.R. 4069 but warrants attention is emergency response training. CMA strongly believes that a necessary first step for dealing with the training issue is to assess the actual needs of emergency responders around the country. Until such an assessment is conducted, the establishment of any training fund would be premature. Moreover, a mechanism is now in place to conduct such an emergency response needs assessment. Under Title III of the Superfund Amendments and Reauthorization Act, regional planning committees are developing community emergency response preparedness programs for chemical plant accidents. CMA believes that these local planning committees should also evaluate, on a regional basis, response preparedness for transportation incidents and assess what training needs may exist for such regional response teams. CMA believes that such a regionalized approach will ensure the most efficient and coordinated response program. CMA supports the concepts outlined by the Hazardous Materials Advisory Council concerning the proper framework for an emergency response program for transportation incidents.

Mr. **Anderson**. Our next witness is Harold Schaitberger, director of the department of governmental affairs, International Fire Fighters Association. Please proceed.

TESTIMONY OF HAROLD A. SCHAITBERGER, DIRECTOR, DEPARTMENT OF GOVERNMENTAL AFFAIRS AND PUBLIC RELATIONS, INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

Mr. **Schaitberger**. Thank you, Mr. Chairman.

I think the first thing I ought to do is ask to correct my statement. On the second word on the first page, where I began, "Good morning," I would like to change that to "Good evening."

Mr. **Anderson**. Good evening.

Mr. **Schaitberger**. Second, if I may, the testimony which I am going to deliver to the committee today, I would like the chairman and the committee to know that it is being delivered by someone who is not talking from a legal background or a scientific background, but from an individual who has spent his entire life in the fire service community, serving 14 active years on a department, 7 of those years as the command officer of a shift with both engine and truck company responsibilities.

With that, if I may, I would first like to identify the International Association of Fire Fighters as an AFL-CIO affiliated union with 170,000 firefighters nationwide in every State in this country. Our members are frequently the first responders to a hazardous materials incident, and for this reason we have a keen interest in and support H.R. 3334.

Again, at the outset I would like to thank the chairman of the subcommittee for scheduling this important hearing, and particularly the bill's sponsor, Congressman Applegate, for his foresight and persistent support for this vital public safety measure.

The IAFF believes that the citizens of this country and our members are, to quote an old expression, "living on borrowed time." As a result of the failure of the Federal Government to establish and enforce a uniform national data reporting system for responding to hazardous spill emergencies. Each year, firefighters must respond to increasing numbers of hazardous material emergency incidents. In many instances firefighters must respond without being able to identify the particular hazardous materials they are confronting, and with inadequate information regarding the appropriate response for the identified substance.

H.R. 3334 serves to fill that information void by establishing a centralized and computerized data reporting center, and requires shippers of hazardous materials and wastes to access the computer mainframe before shipment and record data of each manifest, and to identify the carrier transporting the toxic substance and its trailer tag, barge, rail car, or aircraft number prior to shipping. This definitive data would then be immediately available, within minutes, not hours, regardless of location, to first responders when an incident occurs.

The IAFF believes that the Department of Transportation has been remiss in fulfilling its legal obligations under the Hazardous Material Transportation Act of 1974. This law states that the Secretary of Transportation shall, and I quote, "establish and maintain a central reporting system and data center so as to be able to provide law enforcement and firefighting personnel of communities, and other interested persons and Government officers, with technical and other information and advice for meeting emergencies connected with the transportation of hazardous materials."

DOT has failed, in our view, to establish such a system. Instead, they have recognized the chemical industry's own service, CHEMTREC, as this obligatory data reporting service. The IAFF has, as mentioned, adopted an official policy position urging our affiliates to cease utilizing the CHEMTREC service because of its many inadequacies.

First, the CHEMTREC service cannot identify the hazardous substance involved in the emergency. The emergency response personnel must first provide CHEMTREC with the identity of the hazardous material involved, and then CHEMTREC can provide certain data. There is no reporting requirement, and therefore CHEMTREC cannot identify the contents of any shipment.

As the former CHEMTREC manager, John C. Zercher, once stated, and I quote, "We must have some clue to the chemical or trade name of the product involved. We can't do a frazzling thing if you describe the material as 'green stuff'—as one California fire chief did." Unfortunately, too many times not much more information is available about the contents of a shipment when firefighters respond to an accident scene. Further, CHEMTREC cannot be accessed by computer from any location. Utilization requires telephoning an answering service.

A review of the report by the Office of Technology Assessment, OTA, shows that DOT's reliance on CHEMTREC has resulted in the lack of reporting of hazardous material incidents. For example, incidents leading to fatalities in a city the size of New York have received widespread press coverage, but at the same time are unknown in the reporting system of DOT. This is inexcusable.

There are an estimated 500,000 shipments of hazardous materials and wastes each day. Although there are no complete statistics available, DOT estimates 3,000 wrecks each year with these shipments. The following incidents illustrate the dangerous scenarios which result when comprehensive identification and response information is not made available to first responders.

In Marshall's Creek, PA, a truck loaded with dynamite and blasting caps broke down on a highway outside of town. Although it is illegal to leave such a cargo unattended, the driver removed the explosives warning placards, hid them in the cab, and left to find somebody to repair the truck's two flat tires. While he was gone, the overheated rubber ignited and firefighters were called. While the firefighters attempted to extinguish the fire, the dynamite exploded, and three firefighters and three spectators were killed. This might not have occurred if a reporting system with computer access were in place, which would have permitted the firefighters to enter identifying information from the outside of the truck into the computer and learn if there was a hazard inside before approaching the truck.

Firefighters in Los Angeles, CA, were more fortunate during a 1975 accident in which a truck pulling two trainers had overturned. Both trailers and their cargo spilled and were blazing. One trailer was loaded with rubber tires, which were burning. The strong stench and thick black smoke made it difficult to determine what was burning in the other trailer. Although the second trailer was not placarded to indicate a hazardous material, the blue smoke indicated alcohol. There was no driver present, no manifest, no placards. The firefighters began to proceed with extinguishing the blaze in the first trailer with water, when fortunately one firefighter discovered a container near the wreckage which identified the cargo in the second trailer as lannate-l-methomyl, an insecticide mixed with methanol. Application of water to this fire would cause an extremely hazardous situation—emission of a toxic gas which could be inhaled or absorbed through the skin.

Luckily, this information was located, and as a result CHEMTREC was able to provide the appropriate warnings, but only after 43 firefighters, 14 policemen, and 37 spectators were treated at a nearby hospital for injuries related to toxic gas. Had the firefighter not chanced upon identifying information for the hazardous cargo, I am certain that more severe injuries and possibly even multiple deaths would have occurred. More importantly, if computer access to information identifying the cargo had been available immediately, many of the injuries that occurred would not have occurred. The proposed system in H.R. 3334 would have allowed immediate access merely by entering the vehicle license plate number into a terminal.

When the IAFF petitioned DOT to have the National Response Center become the primary source of contact, DOT refused. The United States has had for years a National Response Center for hazardous material incidents that has a toll-free, 24-hour, 365-day phone number, and provides direct connection not only to CHEMTREC but to the Environmental Protection Agency and the Coast Guard emergency response teams, the Department of Defense emergency ordinance disposal teams, the Department of Energy radiation response teams, and the Centers for Disease Control, as well as other agencies.

Although the NRC's phone number is now listed in DOT's emergency response guidebook, CHEMTREC's phone number is now prominently displayed on practically every page in big, bold letters. We must question this continual reliance on a trade association, when the Federal Government has a resource, paid for by Federal funds, such as NRC at its disposal. We can only surmise that there is a general attitude of ambivalence within DOT regarding the improvement of data collection and technical assistance for emergency responders.

Much of the testimony in support of this bill has focused on accident scenes and advantages that the central reporting system would provide at the scene of an accident, but there is also an important function for local communities. The data from the reporting system could be analyzed by local communities to determine frequency of shipments, type of shipments, and routes. With this information, local officials would have the ability to make intelligent, informed decisions regarding allocation of resources for hazardous material response teams and training and protective equipment. Without this information, local officials are operating in the dark about what their response needs really are.

As I described earlier, a centralized computer system could allow far more data to be at the disposal of every fire department in the country, utilizing a simple portable computer and phone modem. It would allow the Federal Government developed emergency response data bases such as CAMEO to be made available to every community. CAMEO, which was developed by the National Oceanic and Atmospheric Administration, was designed specifically for use by emergency responders. Once provided with the identity of a hazardous material, the CAMEO system could be accessed by computer and provide chemical data, first aid, protective clothing requirements, evacuation plans, and other recommendations for response immediately.

In summary, the IAFF believes that insufficient attention has been paid to the dangers of hazardous material incidents, and we urge the subcommittee to give expedited consideration to this issue and this important bill and support its enactment.

Thank you, Mr. Chairman.

Mr. ANDERSON. Thank you, Mr. Schaitberger.

Mr. Schaitberger, with respect to emergency response training, could you tell us how firefighters are trained to respond to accidents involving the transportation of hazardous materials?

Mr. SCHAITBERGER. The answer to that is so varied, it would take an entire day to attempt to describe, because it is determined really by the size of the community, the size of the departments, its available resources, and the priorities and goals set by different levels of government agencies as to how much training should be provided. You can go to some of the more sophisticated departments in this country, one right outside of Washington, DC here, Fairfax County, for example, which has a very sophisticated program and a very well-equipped hazardous material response team program. You go to other areas of the country and find virtually nonexistent training in place, people still really operating by seat of the pants. It is varied, at best.

Mr. ANDERSON. Do you have any recommendations on how to change or improve that training?

Mr. SCHAITBERGER. Well, the first recommendation seems to always come back to a problem that I guess you in Congress are facing every day, and that is available resources and the most intelligent application of very limited resources and revenues. Communities are not going to make the commitment to enhance or improve their training unless they believe that the need is really there, so one of the points I try to make in our testimony is that I think that the knowledge of incidents which take place in a community is really a question. It is a mystery, and if localities knew how many incidents were taking place and the potential for danger, then they would able to make better informed decisions on allocating very limited resources and most probably would do so. I think resources are our biggest problem in the fire service, not unlike any other agency of Government.

Mr. ANDERSON. Doug, should I ask him if he has read your bill?

Mr. APPLEGATE. I think he wrote it. [Laughter.]

Mr. ANDERSON. Oh, you think he wrote it? OK. Mr. Applegate?

Mr. APPLEGATE. Thank you, Mr. Chairman, and thank you, Harold, for your testimony, because it was excellent. Obviously I would think that. It is in support of my bill, and I could say that 170,000 firefighters can't be wrong.

I really don't have too much in questions here, only to say that the firefighters are involved in the most dangerous—it is the most dangerous profession of any in the United States. They are first in response to fires, first in response to spills, and any other life-threatening hazard. I don't think that anyone knows more about the emergency needs, nobody knows more about whether or not a system works, than the guy that is on the front line, and that is the firefighter.

You were talking about, in answer to the chairman's question on training, you were talking about how Fairfax County does it, and I understand too that in Prince Georges County they even have a robot down there that they use.

Mr. SCHAITBERGER. Yes, another very good and sophisticated department.

Mr. APPLEGATE. Right, and the problem is that if you are a wealthy community, then you have access to more safety and better protection, and what we need is for a more Federal, uniform type of a system that will protect local communities, local people, local firefighters, and I think that my bill does that. I appreciate very much your coming in and giving that testimony because I think it is very meaningful and it is very powerful, and I thank you.

Mr. SCHAITBERGER. Thank you.

Mr. Chairman, may I have just one moment? I would like to respond, about to the robot. The gentleman that preceded me, I felt maybe misled the committee in the dry cleaning example. It certainly wasn't a dry cleaning truck. It was a truck which was carrying very substantial quantities of dry cleaning chemicals, and I think even the example of the robot is a good example of the need for this bill.

Here you have a department that is very sophisticated, advanced, using the best technology available, and in this case sent a robot out to that truck in order to try to identify what they were dealing with. The fact of the matter was that it did take hours before they could identify what that substance was. Had that robot been able to simply focus on that license tag and access this system, they would have known what they were dealing with in virtually minutes, and in the fire service life and death are separated by minutes, not hours.

Mr. ANDERSON. Well, thank you very much. Thank you very much, Harold, for your presentation. I appreciate it.

[Mr. Schaitberger's prepared statement follows:]

INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS
1750 NEW YORK AVENUE, N.W., WASHINGTON, D.C. 20006
TELEPHONE NO. (202) 737-8484

John A. Gannon
President

Alfred K. Whitehead
Secretary Treasurer

TESTIMONY

BEFORE THE

U.S. HOUSE OF REPRESENTATIVES

PUBLIC WORKS AND TRANSPORTATION COMMITTEE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

ON

H.R. 3334, HAZARDOUS MATERIALS TRANSPORTATION AMENDMENTS OF 1987

MAY 25, 1988

BY

HAROLD A. SCHAITBERGER, DIRECTOR
DEPARTMENT OF GOVERNMENTAL AFFAIRS
AND PUBLIC RELATIONS
INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

Affiliated with
AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS ● CANADIAN LABOUR CONGRESS ● NATIONAL FIRE PROTECTION ASSOCIATION

GOOD MORNING, MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, MY NAME IS HAROLD SCHAITBERGER AND I AM THE DIRECTOR OF GOVERNMENTAL AFFAIRS AND PUBLIC RELATIONS FOR THE INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS, AN AFL-CIO AFFILIATED UNION. THE IAFF REPRESENTS 170,000 FIRE FIGHTERS NATIONWIDE, IN EVERY STATE IN THIS COUNTRY. OUR MEMBERS ARE FREQUENTLY THE FIRST RESPONDERS TO A HAZARDOUS MATERIALS INCIDENT. FOR THIS REASON, WE HAVE A KEEN INTEREST IN H.R. 3334, THE HAZARDOUS MATERIALS TRANSPORTATION ACT AMENDMENTS.

AT THE OUTSET, I WANT TO THANK THE SUBCOMMITTEE CHAIRMAN FOR SCHEDULING THIS IMPORTANT HEARING, AND THE BILL'S SPONSOR, REP. DOUGLAS APPLEGATE FOR HIS FORESIGHT AND PERSISTENT SUPPORT FOR THIS VITAL PUBLIC SAFETY MEASURE.

THE IAFF BELIEVES THAT THE CITIZENS OF THIS COUNTRY AND OUR MEMBERS ARE, TO QUOTE AN OLD EXPRESSION, "LIVING ON BORROWED TIME", AS A RESULT OF THE FAILURE OF THE FEDERAL GOVERNMENT TO ESTABLISH AND ENFORCE A UNIFORM NATIONAL DATA REPORTING SYSTEM FOR RESPONDING TO HAZARDOUS SPILL EMERGENCIES.

EACH YEAR, FIRE FIGHTERS MUST RESPOND TO INCREASING NUMBERS OF HAZARDOUS MATERIALS EMERGENCY INCIDENTS. IN MANY

INSTANCES, FIRE FIGHTERS MUST RESPOND WITHOUT BEING ABLE TO IDENTIFY THE PARTICULAR HAZARDOUS MATERIALS THEY ARE CONFRONTING, AND WITH INADEQUATE INFORMATION REGARDING THE APPROPRIATE RESPONSE FOR THE SUBSTANCE.

H.R. 3334 SERVES TO FILL THAT INFORMATION VOID BY ESTABLISHING A CENTRALIZED AND COMPUTERIZED DATA REPORTING CENTER AND REQUIRES SHIPPERS OF HAZARDOUS MATERIALS AND WASTES TO ACCESS THE COMPUTER MAINFRAME BEFORE SHIPMENT AND RECORD DATA OF EACH MANIFEST AND TO IDENTIFY THE CARRIER TRANSPORTING THE TOXIC SUBSTANCE AND ITS TRAILER TAG, BARGE, RAIL CAR OR AIRCRAFT NUMBER PRIOR TO SHIPPING.

THE DEFINITIVE DATA WOULD THEN BE IMMEDIATELY AVAILABLE, WITHIN MINUTES, REGARDLESS OF LOCATION, TO FIRST RESPONDERS WHEN AN INCIDENT OCCURS.

THE IAFF BELIEVES THAT THE DEPARTMENT OF TRANSPORTATION HAS BEEN REMISS IN FULFILLING ITS LEGAL OBLIGATIONS UNDER THE HAZARDOUS MATERIALS TRANSPORTATION ACT OF 1974. THIS LAW STATES THAT THE SECRETARY OF TRANSPORTATION SHALL: "ESTABLISH AND MAINTAIN A CENTRAL REPORTING SYSTEM AND DATA CENTER SO AS TO BE ABLE TO PROVIDE LAW-ENFORCEMENT AND FIRE-FIGHTING PERSONNEL OF COMMUNITIES, AND OTHER INTERESTED PERSONS AND GOVERNMENT OFFICERS, WITH TECHNICAL AND OTHER INFORMATION AND ADVICE FOR MEETING EMERGENCIES CONNECTED WITH THE TRANSPORTATION OF HAZARDOUS MATERIALS."

DOT HAS FAILED TO ESTABLISH SUCH A SYSTEM. INSTEAD, THEY HAVE RECOGNIZED THE CHEMICAL INDUSTRY'S OWN SERVICE, "CHEMTREC" AS THIS OBLIGATORY DATA REPORTING SERVICE. THE IAFF HAS ADOPTED AN OFFICIAL POLICY POSITION URGING OUR AFFILIATES TO CEASE UTILIZING THE CHEMTREC SERVICE BECAUSE OF ITS MANY INADEQUACIES. FIRST, THE CHEMTREC SERVICE CANNOT IDENTIFY THE HAZARDOUS SUBSTANCE INVOLVED IN THE EMERGENCY. THE EMERGENCY RESPONSE PERSONNEL MUST FIRST PROVIDE CHEMTREC WITH THE IDENTITY OF THE HAZARDOUS MATERIAL INVOLVED AND THEN CHEMTREC CAN PROVIDE CERTAIN DATA. THERE IS NO REPORTING REQUIREMENT, AND THEREFORE CHEMTREC CANNOT IDENTIFY THE CONTENTS OF ANY SHIPMENT. AS THE FORMER CHEMTREC MANAGER, JOHN C. ZERCHER ONCE STATED "WE MUST HAVE SOME CLUE TO THE CHEMICAL OR TRADE NAME OF THE PRODUCT INVOLVED. WE CAN'T DO A FRAZZLING THING IF YOU DESCRIBE THE MATERIAL AS 'GREEN STUFF'-AS ONE CALIFORNIA FIRE CHIEF DID." UNFORTUNATELY, TOO MANY TIMES, NOT MUCH MORE INFORMATION IS AVAILABLE ABOUT THE CONTENTS OF A SHIPMENT WHEN FIRE FIGHTERS RESPOND TO AN ACCIDENT. FURTHER, CHEMTREC CANNOT BE ACCESSED BY COMPUTER FROM ANY LOCATION; UTILIZATION REQUIRES TELEPHONING AN ANSWERING SERVICE.

A REVIEW OF THE REPORT BY THE OFFICE OF TECHNOLOGY ASSESSMENT (OTA) SHOWS THAT DOT'S RELIANCE ON CHEMTREC HAS RESULTED IN THE LACK OF REPORTING OF HAZARDOUS MATERIALS INCIDENTS. FOR EXAMPLE, INCIDENTS LEADING TO FATALITIES IN A CITY THE SIZE OF NEW YORK HAVE RECEIVED WIDE SPREAD PRESS COVERAGE, BUT ARE UNKNOWN IN THE REPORTING OF DOT. THIS IS INEXCUSABLE.

THERE ARE AN ESTIMATED 500,000 SHIPMENTS OF HAZARDOUS MATERIALS AND WASTES EACH DAY. ALTHOUGH THERE ARE NO COMPLETE STATISTICS AVAILABLE, DOT ESTIMATES 3,000 WRECKS EACH YEAR WITH THESE SHIPMENTS. THE FOLLOWING INCIDENTS ILLUSTRATE THE DANGEROUS SCENARIOS WHICH RESULT WHEN COMPREHENSIVE IDENTIFICATION AND RESPONSE INFORMATION IS NOT MADE AVAILABLE TO FIRST RESPONDERS.

IN MARSHALLS CREEK, PENNSYLVANIA A TRUCK LOADED WITH DYNAMITE AND BLASTING CAPS BROKE DOWN ON A HIGHWAY OUTSIDE OF TOWN. ALTHOUGH IT IS ILLEGAL TO LEAVE SUCH CARGO UNATTENDED, THE DRIVER REMOVED THE EXPLOSIVE'S WARNING PLACARDS, HID THEM IN THE CAB, AND LEFT TO FIND SOMEBODY TO REPAIR THE TRUCK'S TWO FLAT TIRES. WHILE HE WAS GONE, THE OVERHEATED RUBBER IGNITED AND FIRE FIGHTERS WERE CALLED. WHILE THE FIRE FIGHTERS ATTEMPTED TO EXTINGUISH THE FIRE, THE DYNAMITE EXPLODED AND THREE FIRE FIGHTERS AND THREE SPECTATORS WERE KILLED. THIS MIGHT NOT HAVE OCCURRED IF A REPORTING SYSTEM WITH COMPUTER ACCESS WERE IN PLACE, WHICH WOULD HAVE PERMITTED THE FIRE FIGHTERS TO ENTER IDENTIFYING INFORMATION FROM THE OUTSIDE OF THE TRUCK INTO THE COMPUTER AND LEARN OF THE HAZARD INSIDE BEFORE APPROACHING THE TRUCK.

FIRE FIGHTERS IN LOS ANGELES, CALIFORNIA WERE MORE FORTUNATE DURING A 1975 ACCIDENT IN WHICH A TRUCK PULLING TWO TRAILERS HAD OVERTURNED. BOTH TRAILERS AND THEIR CARGO SPILLED AND WERE BLAZING. ONE TRAILER WAS LOADED WITH RUBBER TIRES WHICH WERE BURNING. THE STRONG STENCH AND THICK BLACK SMOKE MADE IT

DIFFICULT TO DETERMINE WHAT WAS BURNING IN THE OTHER TRAILER. ALTHOUGH THE SECOND TRAILER WAS NOT PLACARDED TO INDICATE A HAZARDOUS MATERIAL, THE BLUE SMOKE INDICATED ALCOHOL. THERE WAS NO DRIVER PRESENT, NO MANIFEST, NO PLACARD. THE FIRE FIGHTERS BEGAN TO PROCEED WITH EXTINGUISHING THE BLAZE IN THE FIRST TRAILER WITH WATER WHEN FORTUNATELY ONE FIRE FIGHTER DISCOVERED A CONTAINER NEAR THE WRECKAGE WHICH IDENTIFIED THE CARGO IN THE SECOND TRAILER AS LANNATE L METHOMYL, AND INSECTICIDE MIXED WITH METHANOL. APPLICATION OF WATER TO THIS FIRE WOULD CAUSE AN EXTREMELY HAZARDOUS SITUATION--EMISSION OF A TOXIC GAS WHICH COULD BE INHALED OR ABSORBED THROUGH THE SKIN. LUCKILY, THIS INFORMATION WAS LOCATED AND AS A RESULT CHEMTREC WAS ABLE TO PROVIDE THE APPROPRIATE WARNINGS--BUT ONLY AFTER 43 FIRE FIGHTERS, 14 POLICEMEN AND 37 SPECTATORS WERE TREATED AT THE NEARBY HOSPITAL FOR INJURIES RELATED TO THE TOXIC GAS. HAD THE FIRE FIGHTER NOT CHANCED UPON IDENTIFYING INFORMATION FOR THE HAZARDOUS CARGO, I AM CERTAIN THAT MORE SEVERE INJURIES AND POSSIBLY EVEN MULTIPLE DEATHS WOULD HAVE OCCURRED MORE IMPORTANTLY, IF COMPUTER ACCESS TO INFORMATION IDENTIFYING THE CARGO HAD BEEN AVAILABLE IMMEDIATELY, MANY OF THE INJURIES WOULD NOT HAVE OCCURRED. THE PROPOSED SYSTEM IN H.R. 1334 WOULD HAVE ALLOWED IMMEDIATE ACCESS MERELY BY ENTERING THE VEHICLE LICENSE PLATE NUMBER INTO A TERMINAL.

WHEN THE IAFF PETITIONED THE DOT TO HAVE THE NATIONAL RESPONSE CENTER BECOME THE PRIMARY SOURCE OF CONTACT, DOT REFUSED. THE UNITED STATES HAS HAD FOR YEARS A NATIONAL

RESPONSE CENTER (NRC) FOR HAZARDOUS MATERIALS INCIDENTS THAT HAS A TOLL FREE 24-HOUR, 365 DAY PHONE NUMBER AND PROVIDES DIRECT CONNECTION TO NOT ONLY CHEMTREC, BUT TO THE ENVIRONMENTAL PROTECTION AGENCY AND COAST GUARD EMERGENCY RESPONSE TEAMS, DEPARTMENT OF DEFENSE EMERGENCY ORDINANCE DISPOSAL TEAMS, DEPARTMENT OF ENERGY RADIATION RESPONSE TEAMS AND THE CENTERS FOR DISEASE CONTROL AS WELL AS OTHER AGENCIES. ALTHOUGH THE NRC'S PHONE NUMBER IS NOW LISTED IN THE DOT'S EMERGENCY RESPONSE GUIDEBOOK, CHEMTREC'S PHONE NUMBER IS NOW PROMINENTLY DISPLAYED ON PRACTICALLY EVERY PAGE IN BIG, BOLD LETTERS.

WE MUST QUESTION THIS CONTINUAL RELIANCE ON A TRADE ASSOCIATION WHEN THE FEDERAL GOVERNMENT HAS A RESOURCE, PAID FOR BY FEDERAL FUNDS, SUCH AS NRC AT ITS DISPOSAL. WE CAN ONLY SURMISE THAT THERE IS A GENERAL ATTITUDE OF AMBIVALENCE WITHIN DOT REGARDING THE IMPROVEMENT OF DATA COLLECTION AND TECHNICAL ASSISTANCE FOR EMERGENCY RESPONDERS.

MUCH OF THE TESTIMONY IN SUPPORT OF THIS BILL HAS FOCUSED ON ACCIDENT SCENES AND THE ADVANTAGES THAT THE CENTRAL REPORTING SYSTEM WOULD PROVIDE AT THE SCENE OF AN ACCIDENT. BUT THERE IS ALSO ANOTHER IMPORTANT FUNCTION FOR LOCAL COMMUNITIES.

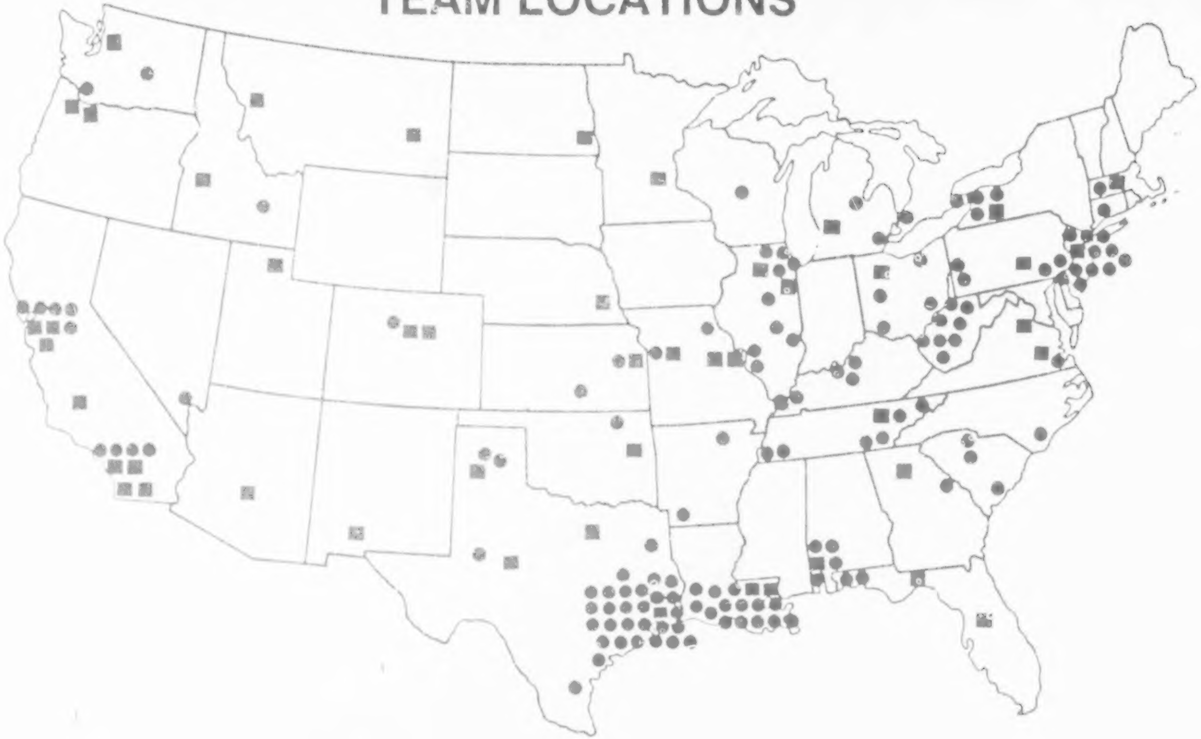
THE DATA FROM THE REPORTING SYSTEM COULD BE ANALYZED BY LOCAL COMMUNITIES TO DETERMINE FREQUENCY OF SHIPMENTS, TYPE OF SHIPMENTS AND ROUTES. WITH THIS INFORMATION, LOCAL OFFICIALS WOULD HAVE THE ABILITY TO MAKE INTELLIGENT, INFORMED

DECISIONS REGARDING ALLOCATION OF RESOURCES FOR HAZARDOUS MATERIALS RESPONSE TEAMS, TRAINING AND PROTECTIVE EQUIPMENT. WITHOUT THIS INFORMATION, LOCAL OFFICIALS ARE OPERATING IN THE DARK ABOUT WHAT THEIR RESPONSE NEEDS ARE.

AS I DESCRIBED EARLIER, A CENTRALIZED COMPUTER SYSTEM COULD ALLOW FAR MORE DATA TO BE AT THE DISPOSAL OF EVERY FIRE DEPARTMENT IN THE COUNTRY UTILIZING A SIMPLE, PORTABLE COMPUTER AND A PHONE MODEM. IT WOULD ALLOW THE FEDERAL GOVERNMENT DEVELOPED EMERGENCY RESPONSE DATABASES SUCH AS CAMEO, TO BE MADE AVAILABLE TO EVERY COMMUNITY. CAMEO, WHICH WAS DEVELOPED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, WAS DESIGNED SPECIFICALLY FOR USE BY EMERGENCY RESPONDERS. ONCE PROVIDED WITH THE IDENTITY OF A HAZARDOUS MATERIAL, THE CAMEO SYSTEM COULD BE ACCESSED BY COMPUTER AND PROVIDE CHEMICAL DATA, FIRST AID, PROTECTIVE CLOTHING REQUIREMENTS EVACUATION PLANS AND OTHER RECOMMENDATIONS FOR RESPONSE.

IN SUMMARY, THE IAFF BELIEVES THAT INSUFFICIENT ATTENTION HAS BEEN PAID TO THE DANGERS OF HAZARDOUS MATERIALS INCIDENTS AND WE URGE THE SUBCOMMITTEE TO GIVE EXPEDITED CONSIDERATION OF THIS ISSUE, AND THIS IMPORTANT BILL, AND SUPPORT ITS ENACTMENT.

CHEMNET EMERGENCY RESPONSE TEAM LOCATIONS

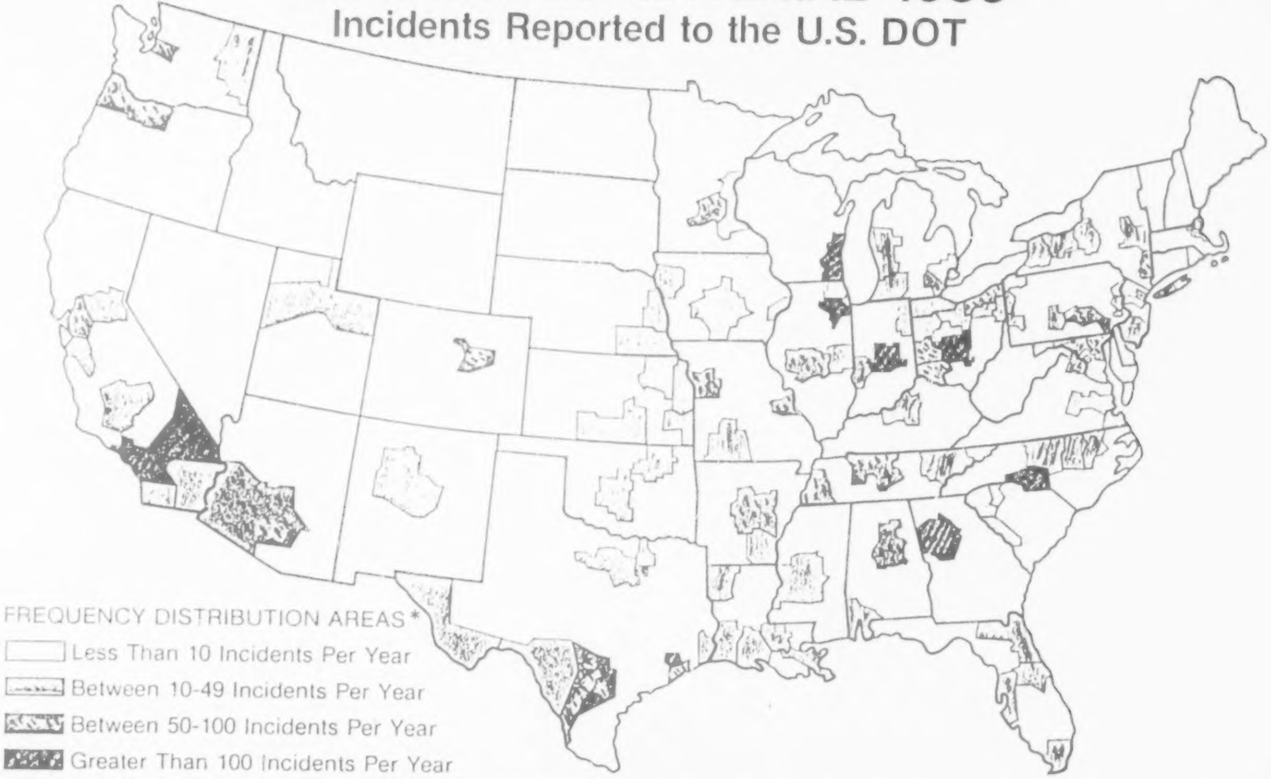


LEGEND
● Chemnet Chemical Industry Emergency Response Teams
■ Chemnet Contractor Emergency Response Teams

2/6/86

TRANSPORTATION INCIDENTS INVOLVING HAZARDOUS MATERIAL-1985

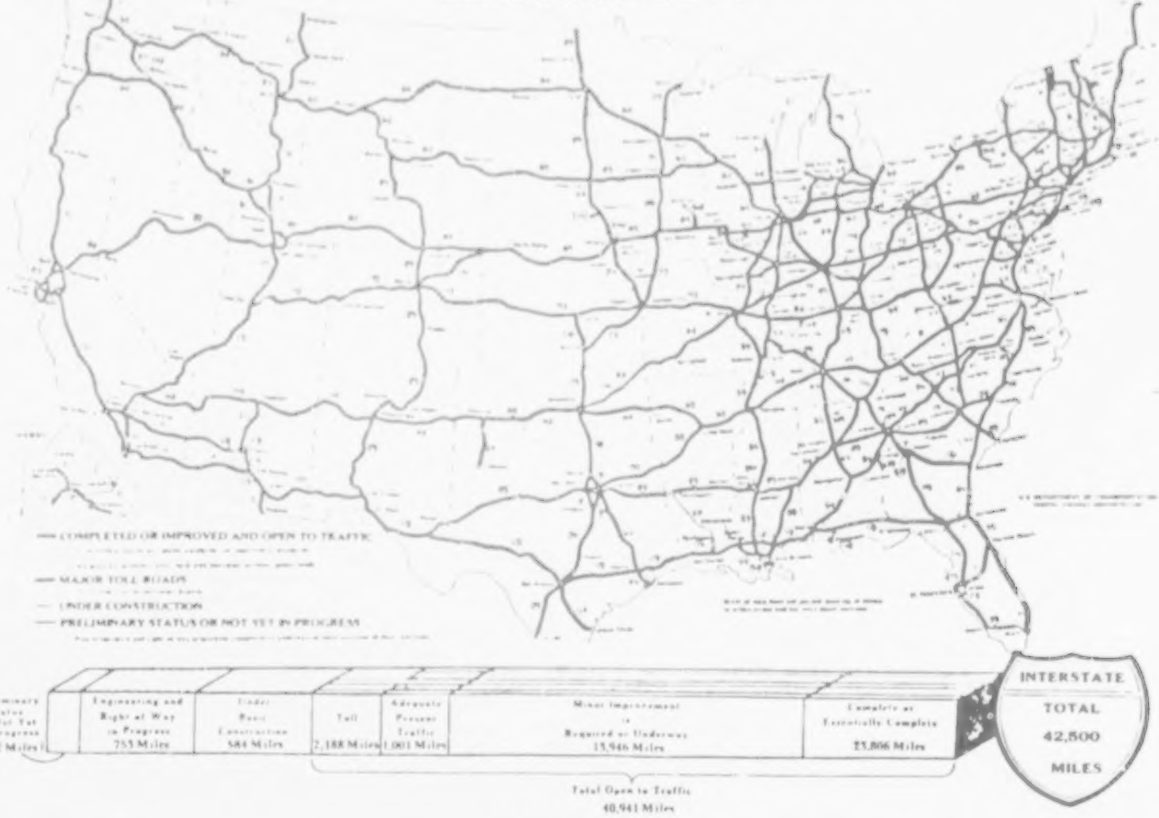
Incidents Reported to the U.S. DOT


FREQUENCY DISTRIBUTION AREAS*
☐ Less Than 10 Incidents Per Year
░ Between 10-49 Incidents Per Year
▒ Between 50-100 Incidents Per Year
▓ Greater Than 100 Incidents Per Year

*Areas shown on this map are taken from the U.S. Postal Service's Three-Digit Zip Code Map.

THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

STATUS OF IMPROVEMENT AS OF [illegible]


COMPLETED OR IMPROVED AND OPEN TO TRAFFIC
MAJOR TOLL ROADS
UNDER CONSTRUCTION
PRELIMINARY STATUS OR NOT YET IN PROGRESS
Preliminary Status or Not Yet in Progress 222 Miles
Engineering and Right of Way in Progress 755 Miles
Under Basic Construction 584 Miles
Toll 2,188 Miles
Adequate Present Traffic 1,001 Miles
Minor Improvement is Required or Underway 15,946 Miles
Complete or Essentially Complete 21,806 Miles
Total Open to Traffic 40,941 Miles
INTERSTATE
TOTAL
42,500
MILES

JOHN G. ROWLAND
5TH DISTRICT, CONNECTICUT

WASHINGTON OFFICE
512 CANNON HOUSE OFFICE BUILDING
PHONE (202) 225-3822

DISTRICT OFFICE
135 GRAND STREET
WATERBURY, CT 06702
1-800-556-5089
(203) 573-1418

COMMITTEE ON
ARMED SERVICES
SUBCOMMITTEE ON PROCUREMENT
AND MILITARY NUCLEAR SYSTEMS
SUBCOMMITTEE ON READINESS

COMMITTEE ON VETERANS' AFFAIRS
SUBCOMMITTEE ON HOSPITALS AND HEALTH CARE
SUBCOMMITTEE ON HOUSING AND MEMORIAL AFFAIRS

Congress of the United States
House of Representatives
Washington, DC 20515

STATEMENT OF CONGRESSMAN JOHN G. ROWLAND
before the
SUBCOMMITTEE ON SURFACE TRANSPORTATION
of the
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
May 25, 1988

Chairman Anderson and Members of the Subcommittee:

Thank you for permitting me to testify this morning on issues pertaining to the transportion of nuclear wastes. You are to be commended for holding this very timely hearing since the issue as it relates to the Hazardous Materials Transportation Act, will continue to grow in importance in the days ahead.

Very simply, I would submit that the time has come for both the House and Senate to come to terms with one simple fact. That fact is our current statute governing the routing of nuclear waste over the nation's highway system, does not work. The procedures contained within the Hazardous Materials Transportation Act attempt on one hand to establish national standards over the designation of highway routes. Yet, on the other hand, any municipality is free to try and veto such standards by seeking a waiver from a designated route under the "nonpreemption determination" process.

A classic example of the need for uniform routing standards is borne out by the current battle between the City of New York and the State of Connecticut over the transport of spent nuclear fuel from the Brookhaven National laboratory on Long Island. As you know, the City has invoked the nonpreemption determination procedure to avoid having this spent nuclear fuel traverse the metropolitan area. Alternatively, they propose to load the material on barges, send it across Long Island Sound to Connecticut, and then truck it on a circuitous route through my State towards the final disposal site in Idaho.

This controversy has preoccupied a significant amount of my time since I entered Congress in 1985. By way of background, my district would be the most impacted were New York City to win its bid.

In looking at the need for reform to the nuclear waste transportation laws, I will note that New York City's attempts to evade responsibility for Brookhaven's spent fuel is now twelve years old. Yet, no end is in sight to this controversy. To be specific, on this issue New York City has lost in the Court of Appeals. They have lost in the Supreme Court. They've lost every administrative action which has been decided to date. Now, however, the City's legal representatives are back in Court suing DoT and rehashing the same old arguments.

I am confident that history will repeat itself and that the City will lose once again in the current filing before the United States District Court for the Southern District of New York. The problem is, the process could go on forever with New York City filing a litany of appeals.

Quite frankly, an even bigger problem will ensue if New York prevails. Both Waterbury and Danbury -- which are two large cities in my district along the proposed alternative route -- could make virtually the same case for a nonpreemption determination as New York. The end result would be a continuation of this fight with years of costly litigation. Additionally, I fear that a decision in New York's favor could trigger a nationwide avalanche of similar filings by municipalities who will seek to duplicate the City's success in this precedent-setting case.

Although I am somewhat sympathetic to circumstances which might be unique to localities -- and thus warrant the granting of special treatment in the form of a nonpreemption determination -- I am afraid the law as it currently stands affords too much of an opportunity for abuse of the process. As such, it would be my recommendation that some type of finality be established to the routing process. While I am hesitant to advocate a complete elimination of the nonpreemption determination option for localities, I do believe at a minimum, the threshold tests of applicability should be raised.

Mr. Chairman, Congress needs to fish or cut bait on this issue. Either we provide for uniform routing standards or we don't. If the latter is going to be the case, then I suggest it will become impossible to safely and swiftly transport nuclear materials to their final disposal sites. The end result would be chaos.

A better way to proceed might be in the direction proposed through H.R. 4069. This legislation was drafted by the Department of Transportation in an effort to bring about a more expeditious resolution of routing disputes, and I believe the measure warrants careful consideration by your Committee.

In closing, I do appreciate the opportunity to testify this morning. At this time, I would be happy to answer any questions which you might have.

Mr. ANDERSON. Our next witnesses are a panel of three: George Berg, the assistant director for national affairs of the American Farm Bureau Federation; Elizabeth McCormick, chairperson, Chemical Waste Transportation Council, National Solid Waste Management Association; and Barry Massey, manager of the Hazardous Materials and Logistics Department, E.I. duPont, Wilmington, DE, on behalf of the National Industrial Transportation League.

We do have your prepared statements. They will all be made a matter of the record in their entirety. You may proceed.

TESTIMONY OF GEORGE L. BERG, JR., ASSISTANT DIRECTOR, NATIONAL AFFAIRS DIVISION, AMERICAN FARM BUREAU FEDERATION; ELIZABETH McCORMICK, CHAIR, CHEMICAL WASTE TRANSPORTATION COUNCIL, NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION; AND BARRY MASSEY, MANAGER, HAZARDOUS MATERIALS, MATERIALS AND LOGISTICS DEPARTMENT, E.I. DU PONT, WILINGTON, DE, ON BEHALF OF THE NATIONAL INDUSTRIAL TRANSPORTATION LEAGUE

Mr. BERG. Thank you, Mr. Chairman. I have summarized my comments and I will try to be as brief as possible, in order to save a little time.

The American Farm Bureau Federation is the Nation's largest general farm organization, representing more than 3.6 million member families. Anhydrous ammonia is used extensively as a fertilizer by American farmers. Therefore, we are very much concerned by the Department of Transportation's proposal to reclassify anhydrous ammonia from a nonflammable gas to a poisonous gas.

The Farm Bureau adopted the following policy at our annual meeting in January: We support the classification of anhydrous ammonia as a corrosive gas and the labeling thereof. We have filed comments with the Department of Transportation urging that DOT reclassify anhydrous ammonia as a corrosive gas, which is identical to the classification adopted by Canada. In doing so, Farm Bureau believes that the adoption of such a classification would more accurately reflect the characteristics of the product, would be consistent with Canada, our largest trading partner in anhydrous ammonia, and would not cause significant economic disruption to the U.S. farm sector.

It should be emphasized that the United States is the world's largest producer and exporter of corn, which is a nitrogen intensive crop. Anhydrous ammonia is the lowest cost form of nitrogen for corn production and has been safely used for many years. In 1960, the average yield per acre was 55 bushels of corn. In 1987, the average yield is 125 bushels. According to U.S. corn producers, this boost in yield is attributable in part to their use of anhydrous ammonia.

In addition to the broad issue of farmer profitability and agricultural infrastructure concerns, a focus on the specific cost impacts should also be considered. Reclassification of anhydrous ammonia from a nonflammable gas to a poison gas would dramatically impact fertilizer shipping rates, insurance costs, safety, marketing, and would establish an environment spawning overregulation of the product.

A few brief examples are as follows: A reclassification to a poison gas would produce higher transportation rates, which would ultimately result in higher production costs for the farmer. Obtaining insurance at reasonable rates for shipping fertilizer materials would be a challenge for the agricultural community, if the insurance is available at all. We cannot be sure what the increase in rates would be if the class change were implemented, but if the limits of liability were increased, a conservative estimate of 20 percent would add an annual cost of $90 million to an industry already struggling to survive.

Federal, State, and local restrictions for hazardous materials are keyed for product classification. If anhydrous ammonia were classified as a poison gas, it would come within the scope of many State routing laws and could be prohibited from transport through many jurisdictions.

As the Nation's largest general farm organization in the country, Farm Bureau strongly opposes the reclassification of anhydrous ammonia.

Farm Bureau also petitioned the Federal Highway Administration in January, requesting that farmers and ranchers with farm license plates on their trucks or who drive their trucks less than 15,000 miles per year be exempt from the newly enacted commercial driver's license requirements. Drivers of farm vehicles are affected by the commercial driver requirements because some of their vehicles weigh more than 26,000 pounds and many of the vehicles are used to transport chemicals in the amount that requires a placard.

Farm Bureau believes farmers should be exempt from the commercial driver's license program because they do not consider themselves to be commercial drivers. Unlike the motor carrier operators, farm truck operators normally operate their vehicles on short, local trips during daylight hours. They generally drive less than 15,000 miles a year, far less than the heavy mileage logged annually by the commercial motor vehicle operators.

Under the provisions of the Motor Vehicle Safety Act of 1986, every farmer, spouse, hired personnel, son or daughter who transports any kind of hazardous chemical material from the supply store to the farm will be required to have a commercial driver's license. Many farmers operate very small enterprises. Some are part-time farmers, and their hazardous needs are small and seasonal.

According to the most recent agricultural census, only 55 percent of the U.S. farmers were solely engaged in full-time farming. The remaining 45 percent were part-time farmers. It is also estimated that 1.4 million or 62 percent of the total 2.3 million U.S. farmers had farm sales of under $20,000 during 1985. Obviously, many of these farmers would not use substantial amounts of agricultural chemicals or fertilizers on their farms. We believe for U.S. farmers to have a commercial driver's license would be a substantial hardship and not in the best public interest.

Mr. Chairman, we appreciate the opportunity to present our comments, both on anhydrous ammonia and the commercial driver's license law.

Mr. **Anderson**. Thank you, George. We will hold the questions until the panel is finished.

Our next witness, Elizabeth McCormick.

Ms. **McCormick**. Good evening. I am Elizabeth McCormick, with GSX Chemical Services out of Columbia, SC. I am here this evening as chairman of the Chemical Waste Transportation Council, a component of the National Solid Waste Management Association.

To give you a little background on why we are concerned with the various bills here today, I would like to give you some background on our organization and industry. Ninety-six percent of the hazardous waste produced in this country is managed on the site where it is produced. We transport the remaining 4 percent of that hazardous waste. That accounts for about 1 percent of all of the hazardous materials being carried on the road, but that doesn't reflect our actual participation in hazardous materials movement within this country.

About 5 percent of all the trucks carrying hazardous materials are our trucks carrying wastes, and we drive about 6½ to 7 percent of all of the hazardous materials miles each year. Despite this relatively high percentage participation, we have an excellent safety record.

Hazardous wastes account for considerably less than 1 percent of all hazardous materials incidents. Despite that safety record, we may serve as a model for many of the proposals that are being presented. Over the years we have been taxed, routed, subject to prenotification, permitted, fingerprinted, and generally subject to many of the legislative solutions that have been proposed here, so I would like to go over some of our specific concerns, if I may.

One of our major concerns is with registration and permitting. Since 1980, we have been subject to an EPA requirement to obtain an identification number. In our opinion, this is not a very useful program. It has nothing to do with our qualifications, it is not subject to periodic review, and so forth. At the other extreme, some States go to the point where they fingerprint us and ask where our parents were born. I am not sure that really contributes much to public safety.

Because of the current variations from one extreme to another, we urge a registration program at the Federal level, and we further urge that any registration program should apply to all modes of hazardous materials transportation, should preempt duplicative and contradictory State requirements, should be administered by the DOT at a Federal level, should be periodically renewed; for example, every three years, included a showing of financial responsibility, and include some sort of evaluation of our safety and fitness to continue transporting.

We are also concerned about funding for emergency response. Like everyone else, we are deeply concerned about the abilities of our firefighters and other emergency response personnel to respond to incidents, not only transportation-related incidents, but those which occur at fixed facilities.

We have been subject to a lot of fees. My own company, which has a small transportation operation, pays $44,000 a year just in hazardous waste transportation fees, not related to any other permitting program. We have not been able to determine a good relationship between those fees and transportation safety. We would urge that any fee system goes toward transportation-related safety. If there is going to be a fee system to provide for the training of emergency response personnel in general, we would urge that it be broadbased, risk-based, and cover all those who contribute to the problems of emergency response and hazardous materials.

We are also naturally quite concerned over routing. We have been subject to a lot of routing restrictions over the years. Frequently these are political, "NIMBY" based routings. We are politically unpopular. Nobody wants hazardous waste in their backyard or on their side streets or anywhere else.

There are times, though, that routing is a very appropriate way to protect public safety. We would urge that if routing restrictions are to be written, that the Federal DOT create routing criteria, and that if the States or localities choose to have routing criteria, they adopt those criteria. We would suggest that routing be limited to placarded loads; that there be some pretty good, strong, strict enforcement provisions to prevent the Squirrel Hill Tunnel in Pittsburgh from being used unnecessarily.

We would like to see a provision for posting routes, and we would especially like to see some central location where we could contact or have a published route listing. At this point it is very difficult for interstate shippers to find out all the routing restrictions in each little community they go through, so if there are routing restrictions we would very much appreciate a central location for learning of those restrictions.

We would like to provide for public hearings, due process, to protect all of the interested parties in routing, not just the political jurisdiction that is considering imposing routing but those who are also going to be affected, such as shippers and carriers and adjacent political jurisdictions. We would suggest any routing criteria provide free, direct access to commerce. Gas stations are on every corner, so are dry cleaners, everyone else who handles hazardous materials, needs access to free commerce. We would also suggest that any routing restrictions take into account the driver's need to stop for fuel, for repairs when their hours of service are over, and so forth, and that there be provisions for diversion in the case of bad weather, emergency, bad traffic, et cetera.

Prenotification is another concern. I have read Mr. Applegate's bill several times. I have a copy of it with me. I am sorry, sir, that we oppose many aspects of that bill.

Mr. APPLEGATE. Well, I'm glad you read it anyway.

Ms. MCCORMICK. I did read it, and I gave it a great deal of consideration. The concept that you have proposed for training we do support, but your prenotification we can't support. If someone is not going to go to the trouble of filling out a manifest that is free, why are they going to make your telephone call and pay $12? The examples that have been given today have dealt with people who were blatantly illegal, and I don't believe that your proposal will change that. I'm sorry, sir. I can't support it.

The Federal role is one that we can support, also. We object as an industry to myriad, conflicting State and local programs designed to regulate our industry. Because of that, we would really appreciate a much stronger Federal role in hazardous materials transportation, and particularly hazardous wastes. We really support the driver qualification programs that have been put forward under the commercial motor vehicle or driver's license program.

We would appreciate it if the Department of Transportation would endeavor to develop good transportation information, to come up with information on the actual flow of hazardous materials in the country. We think that would prioritize or aid people in prioritizing information on needs for emergency responders, for personnel training, for routing restrictions, and so forth.

Finally, the last thing that I would like to do, because I think we would all like to get out of here this evening, is remind you that hazardous materials do include hazardous wastes. We are not a separate entity. We are a subset. I have heard a lot of talk today about what are you going to do about the dumpers. My company cleans up after illegal dumpers. When you hear about incidents on the beltway, that is literally my company, out of our Laurel, Maryland office, responding to that. Until a couple of years ago, when I was in Health and Safety it could literally have been me out there in the middle of the night working on those.

Midnight dumpers tend to be small—in this area, at least—tend to be small, mom-and-pop paint shops, auto body shops, fiberglass operations who simply do not have the financial resources that are necessary to adequately take care of their hazardous wastes. In most cases when we are called to respond to one or two drums by the side of the road, it is not somebody who picked up that waste and illegally dumped it in the course of shipping. It is a small operation who, out of desperation, because they couldn't get their trash people to take it and because they could not afford a commercial hazardous waste company to take it, simply left it somewhere and hoped that they were not caught.

Thank you very much, sir.

Mr. ANDERSON. Thank you, Ms. McCormick.

Barry Massey?

Mr. MASSEY. Chairman Anderson, members of the subcommittee, I first would like to commend you for your endurance today.

My name is Barry Massey. I am manager, Hazardous Materials, Materials and Logistics Department, E.I. du Pont de Nemours & Co., Wilmington, DE. I am appearing today on behalf of the National Industrial Transportation League.

The league long has been involved with the issues surrounding the transportation of hazardous materials, and is dedicated to ensuring the safe and efficient movement of these potentially dangerous but essential commodities. It supported the enactment of the 1974 Hazardous Materials Transportation Act, and believes that the act is working well.

Based on our review of the currently pending legislation, including yours, Mr. Applegate, we believe that H.R. 4069 is a sound vehicle for meeting the goals of improved safety and efficiency in the transportation of hazardous materials. However, we would urge that several improvements be made if we are to fully meet the Nation's needs in this important transportation debate.

Specifically, we believe that the definition of "imminent hazard" should be retained as currently written in the statute. If it is to be amended, there at least should be the standard of reasonable likelihood that serious harm may occur before action is taken to restrict transportation without an administrative hearing. We believe that to revise the definition as proposed in the bill would provide insufficient guidance to the Department of Transportation and could promote confusion and uncertainty.

With respect to the scope of DOT's authority, we support its extension to intrastate matters. We also would urge that the ambiguity be eliminated about whether the department has preemption authority for rail shipments. While the league sees no useful purpose in requiring the same sort of highway routing requirements for the rail industry, we believe that clarification is needed to prevent an inappropriately strict reading of the word "highway." Such an interpretation might prompt State and local entities to believe that this matter is within their purview.

In addition, we would urge that routing restriction requirements provide for input from shippers and carriers, and that this input be made early in the route selection process. We believe that this is the best way to improve safety without disrupting the efficient flow of these commercially important commodities.

Another point of concern to league members is the modification of the standard for assessing civil penalties. We believe that the word "knowingly" is an important protection and that its deletion could have the effect of exposing to penalties those individuals who are acting responsibly. If modification is needed, we would prefer the standard require that a person know or reasonably should have known that he or she was in violation of the law.

The league will not oppose adoption of the bill's carrier permitting provisions, since they are limited to the higher hazard materials such as certain explosives and inhalation hazard materials. However, we believe that such permitting should include training and equipment standards. We share the Hazardous Material Advisory Council's concern about the exact wording of the applicable commodities, as well as about ensuring that any resulting fees or reporting requirements are both fair and reasonable.

We also would caution that such a registration or permit system should not be viewed as a replacement for strong enforcement of safety regulations. In our view, enforcement is a key element in enhancing safety and assuring regulatory compliance. We also feel that enforcement is much more effective when it is done on the highway, and not through paperwork requirements.

Perhaps the most controversial issue in the current debate is the need for and scope of any fund for financing emergency response equipment and training. While the league, in principal, is not opposed to a fund, it does have serious concerns about implementing one at this time. The lack of reliable information on commodity flows and on the scope of current response and training efforts gives us no sound basis for moving ahead in this area.

In connection with these concerns, we believe that H.R. 4153, the Hazardous Materials Transportation Information Act of 1988, represents a good first step in gathering this type of data so that effective public policy planning can be undertaken. However, the league would recommend one important improvement to this bill. We urge that its scope be limited to placarded bulk commodities. Extending this endeavor to small package shipments would be extremely costly and would produce little additional benefit.

In connection with our review of the HMTA, the league believes that consideration should be given to the enactment of Federal "Good Samaritan" legislation. The law's benefit is that it would allow greater use of existing private sector resources, and would place less of a burden on public sector resources. Although many States already have various "Good Samaritan" laws, some companies are becoming increasingly concerned about the liability that they might incur in any litigation resulting from responding to a hazardous material incident.

There is another bill under review by this committee which is of great concern to league members, H.R. 3334, Hazardous Material Transportation Amendments of 1987. While we agree with the intent of improving information flow, we believe that this particular computer system needlessly will add to transportation cost without any appreciable improvement in safety.

The league appreciates this opportunity to present the views of the shipping community. We look forward to working with you and your staff in drafting future legislation.

Mr. **Anderson**. Thank you, Mr. Massey.

George Berg. George, does your request for an exemption from the Commercial Motor Vehicle Safety Act only apply to the small family farmer who operates his or her vehicle? For example, would it apply also to some operators of tank trucks transporting anhydrous ammonia?

Mr. **Berg**. No, Congressman. They wouldn't—the tank truck driver would be a commercial operator. Our proposal would not apply to him. We are talking about farmers who drive short distances to the elevator or to the market.

Mr. **Anderson**. He wouldn't be transporting anhydrous ammonia?

Mr. **Berg**. No, no.

Mr. **Anderson**. Because I am told that there is a lot of it on the farms. That is one of the problems today.

Mr. **Berg**. Well, there is an awful lot of it used on the farms, but not in a tank truck capacity, in maybe a——

Mr. **Anderson**. How would they transport it?

Mr. **Berg**. They transport it in a trailer, in a tank.

Mr. **Anderson**. So it would be a tank.

Mr. **Berg**. It would be a tank.

Mr. **Anderson**. A small tank on a truck.

Mr. **Berg**. A small tank on the back of their trucks.

Mr. **Anderson**. Would that exempt them, too? Would they be exempt from——

Mr. **Berg**. Well, we would hope that they would be exempt but, by the same token, those farmers who do transport that on public highways are subject to the heavy insurance requirements of the Motor Carrier Safety Act of 1980, which is up to $5 million.

Mr. ANDERSON. Now do you support the premise that anyone holding a valid driver's license should be able to operate a large truck, or a truck transporting hazardous materials, without demonstrating an ability to operate such a vehicle? I would like to have you explain your answer.

Mr. BERG. Well, once again, until the Motor Carrier Safety Act of 1986 was enacted, they did operate those trucks. They received—most States have classifications, different classifications, a classification A, a classification B, or whatever, that require a driver to be licensed in the type of a vehicle he is going to drive. We still feel, though, that a farmer driving short distances, he is driving during the daylight hours and so forth, he should be exempt.

Mr. ANDERSON. Do you think that a farmer employing hired personnel would be benefitted by knowing whether or not such a person is a qualified driver and has not had a commercial driver's license suspended or revoked for safety reasons?

Mr. BERG. Well, under the provisions of the law, any employer is required to ask that hired hand or that employee whether he has a safe driving record. I don't think Congress intended for a farmer or an employer to go out and investigate these drivers, but they do or at least they should, and we are advising all farmers to ask those drivers they hire whether they do have a safety record.

Mr. ANDERSON. You have been an employer, haven't you?

Mr. BERG. I have been an employer?

Mr. ANDERSON. An employer.

Mr. BERG. Yes, yes.

Mr. ANDERSON. Haven't you, when you hired people to do this kind of work, haven't you done some checking up?

Mr. BERG. I have. Well, Congressman, you take——

Mr. ANDERSON. When you go hire somebody, you want to find out what their record is?

Mr. BERG. There are times, like for example in your State of California and in the State of Texas, where you have help from Mexico and you are permitting them to drive your trucks. It is pretty hard for a farmer to investigate that driver as to whether he can haul products, commodities to market, or not. That is almost impossible with alien help, immigrant help.

Mr. ANDERSON. Well, he would have to have a license in California to be able to drive in California, and he couldn't be an illegal, so——

Mr. BERG. I am not saying you don't have to have a license. I am just saying that——

Mr. ANDERSON. I realize there are drivers from Mexico who get across the border and drive. We do have that problem, but you can't be a legal, licensed driver without getting a California license and insurance and everything else.

Mr. BERG. Well, if they have a California license, then they should be able to transport agricultural commodities to the market, or go to the co-op and pick up their supplies and bring them back to the farm.

What we are concerned about, Congressman and Mr. Chairman, is that the commercial motor vehicle will impact four or five members of a farm family. We don't have any idea at the moment how much these licenses are going to cost. There are some rumors they could cost as much as $150. The States are going to have to put up special driving courses to license these people in the vehicles that they are going to be operating on. Not every Department of Transportation has a course, a driving course where they can see whether or not these people are capable of driving those vehicles, so it is going to be an expense, a federally mandated expense on the States, to license these people. They are probably going to have to hire more employees to test them, written tests.

Mr. **Anderson**. Ms. McCormick, in your testimony you state the council urges some form of registration program at the Federal level which applies to all modes of hazardous material transport and is tied to safety fitness review. Now would the council support a fee for such a registration program being used for training or emergency response?

Ms. **McCormick**. We would certainly support that, to the extent that the fee was not actually a barrier to entry into the business, and to the extent that that fee was in fact used to enhance transportation safety.

Mr. **Anderson**. How much do you think it would cost or should cost for such a training program?

Ms. **McCormick**. I sincerely hope that the cost would not be borne entirely by the transportation industry. I think that that question has been asked of many people today, and I am not sure that my answer would be any better than anyone else's. Lots.

Mr. **Anderson**. Mr. Massey, on page 5 of your statement you say that before any new safety initiatives are undertaken, more information is needed on identifying the flow patterns of these commodities. My question is, Do shippers and carriers now have data on these patterns, and if not, why not? If they already have that information, why don't they inform Government officials of these flow patterns so that emergency response planning and training can be implemented where needed?

Mr. **Massey**. Yes, I think most industry does have information, at least in bulk quantities, for those placarded bulk shipments, for destination and origin, and also the classification or hazard of the material. What is not generally available is the specific routing to the destination, and therefore providing information for individual localities and specific areas of the country.

You have to look at the mode of transportation a little more specifically. By rail, yes, we do have very good information on exactly where those shipments are, and where they move. In fact, we sometimes have input into that route selection process prior to making the shipment. We and many companies are active in making those determinations before the shipment is made.

By highway, we encounter a little more difficulty. We do know origin, of course. We know the material, we know the quantities, and we know the destinations. However, we do not have the specific route information that would be necessary to the local the State governments.

Mr. **Anderson**. Mr. Applegate?

Mr. **Applegate**. Thank you, Mr. Chairman. It looks like we are in the last half of the ninth inning and——

Mr. **Anderson**. The first half.

Mr. **Applegate**. I'm sorry?

Mr. ANDERSON. First half.

Mr. APPLEGATE. Oh, first half? Well, it depends upon whether we are ahead or behind.

Mr. Berg?

Mr. BERG. Yes, sir?

Mr. APPLEGATE. I don't have any questions. I just want to say that I agree with you that anhydrous ammonia should not be labeled as poisonous gas. As a matter of fact, I have gone on the record to send a letter to the Research and Special Programs Administration to ask them to consider all the facts and what the impact will be, of course also realizing that if they implement that rule, you will come under the same laws that hazardous wastes are subjected to.

Mr. BERG. Yes, sir. We do appreciate your interest in writing a letter to the Department of Transportation.

Mr. APPLEGATE. Good. I would like to ask you to support my bill now. [Laughter.]

Mr. ANDERSON. I knew there would be a catch.

Mr. BERG. Congressman, I have on my desk a copy of your bill. I, in just looking it over briefly, I didn't think that you were directing it toward agriculture or farmers. Your purpose, I think, is establishing a telecommunications system to respond.

I might just say briefly, Farm Bureau is setting up a satellite program of our own. We are going to a great deal of expense, and we hadn't thought about this type of a system, hazardous wastes. We are setting up this satellite to help our national affairs staff to help our other divisions in Farm Bureau, but it could very well be used for that type of a program. But other than that I will certainly give your bill every consideration.

Mr. APPLEGATE. That sounds like the end of one of my letters. [Laughter.]

Mr. BERG. Well, I spent a good many years on the Hill, so I know what you mean. No, I didn't mean it that way. We will take a look at it. We are just a little bit fearful of more trust funds. We have a trust fund for the highways, we have a trust fund for the waterways, we have a trust fund for the airlines, and many other trust funds. The farmers are trying to recover, are struggling to survive, you might say. We are beginning now to have a good export program and things are looking up. We don't need more burdens. That is all I am saying, but we will be glad to take a look at your bill, a little harder look.

Mr. APPLEGATE. OK. Thank you.

Ms. McCormick, you had mentioned you didn't make any bones about the fact that you didn't like my bill, so that's OK.

Ms. MCCORMICK. But I did read it, Mr. Applegate.

Mr. APPLEGATE. You did mean it?

Ms. MCCORMICK. I did read it.

Mr. APPLEGATE. Oh, you did read it. Yes, I appreciate that, too. You are one of the few in the committee that has, and you mentioned something—and maybe I don't have it right, and I can't always read my writing anyway— but you had mentioned that my bill won't do anything as far as anything, that if somebody wanted to do something illegal——

Ms. **McCormick**. Sir, the examples given by the firefighters were both blatantly illegal acts. Removing placards from a load of explosives and departing the scene is blatantly illegal. Failing to label or placard or mark or carry shipping papers on the vehicles involved in the other incident is blatantly illegal. Right now you have to carry a manifest for hazardous waste. For all hazardous materials you have to have a shipping paper, but the waste manifest contains a feedback mechanism to make sure that the load gets where it is supposed to go, and it is free in most States. In some States they do charge for a manifest.

But the fact is that it depends on compliance by the shippers and by the carriers and by the recipients of those manifests for fulfilling its intended purpose. If someone chooses to midnight dump, they are not going to fill out a manifest now, and I doubt if they would make the telephone call required by your system, and therefore would not be in the computer system.

Mr. **Applegate**. That is true, but that is under the system the way it is now, but under my bill, that load couldn't leave the generator without having a manifest. That, when it leaves, when it gets to its destination it is going to be accessed and it is going to be noted that it has arrived. The way it is right now——

Ms. **McCormick**. Right now that is the case. Right now you cannot move a load without a manifest. You——

Mr. **Applegate**. They are doing it, though. Not only that, but they are predumping it a lot of times. It is not a great percentage, but just using it as an example that they are doing that.

Ms. **McCormick**. I am concerned that those who choose to do that would do the same thing under your provision; that they simply would not comply.

Mr. **Applegate**. Yes, but if they don't reach the destination, then they will be subjected to whatever criminal procedures there would be, because they have to deliver it.

Ms. **McCormick**. They are now. They are subject to fines of $50,000 a day and jail if they do not deliver that load, so what I am saying to you, sir, is that this is an enforcement issue. I strongly support improving hazardous materials communication and emergency response capability. More than I could begin to tell you, I support that as a concept.

I regret, however, that I see the same problems with your bill as with the existing manifest provision. If someone simply wants to midnight dump, they are not going to make that phone call. There is already a feedback mechanism in the hazardous waste manifest, so that when a load gets to its destination, a copy of that manifest, signed off by the disposal facility, must be returned to the generator within a specified period of time.

To the extent that people choose to participate in that system, it works. If somebody chooses not to, they are subject to hefty fines, and yet as you say we still have people who don't go along with the scheme, so I don't see your bill as really resolving that problem. I'm sorry, sir.

Mr. **Applegate**. Yes. Well, I understand that it would take 45 days for that—yes, 45 days to get that back to the generator.

Ms. **McCormick**. That is on a Federal level. Most States at this point have a shorter time period. The other thing is——

Mr. **Applegate**. Our bill I think would be a matter of a couple of days.

Ms. **McCormick**. At this point, also, another thing to remember is that you can't just ship a load to a hazardous waste facility. We have hazardous waste facilities in seven States right now, my company does, and you have to schedule that load well in advance. If it doesn't show up, everybody is well aware of that, so people who choose to do things right, do business with us, and the vast majority of people who handle hazardous waste are doing things correctly. It is a very, very limited number of people who are midnight dumping, who are not doing things correctly, and I regret that the provisions of your bill—what you are trying to do is, to correct that very small, minority problem, you are imposing a very significant burden on the vast majority——

Mr. **Applegate**. What very small, minority problem?

Ms. **McCormick**. That very small minority of loads that do not get to their appropriate destination.

Mr. **Applegate**. Well, that isn't necessarily the major thrust of the bill. The major thrust of the bill is in the accident itself and what happens. It is the immediate response that we are trying to get at, the safety factor. Going from the generator to the destination is one thing, and that is a part of this bill. We are also talking about what happens in between, when it is going through that small community and either sideswipes another train or it overturns, and you have chemicals all over the place, not knowing what that is, and you may not know for an hour or so. That is the real basis of what this bill is.

Ms. **McCormick**. We really support the concept of improved emergency communications. We strongly support that idea, but it goes back to the idea that unless someone is in that system, if the load is so badly damaged that you cannot read a placard, you cannot find the shipping papers, and have a dead or damaged driver, you probably aren't going to be able to find out a whole lot about that truck, anyway, and call in on your computer network with identifying information. If the truck is that badly damaged, you are going to have to assume some worst case situations and get into doing your best with what you have to go on. If the truck is so badly damaged that you can't see placards, can't find shipping papers, don't have a driver, you also won't see the identifying numbers

Mr. **Applegate**. Yes. Well, of course, I guess that is the difference between having the placard and having a license plate available, where you will have access to that number. With the placard, of course, you can lose it, and the driver doesn't have to give you the manifest and all that kind of stuff, but the system that we want to work within, you don't have to wait for anybody. You can just go ahead and see it, you can access it in through your own computer, and you can have that back just like that.

It may not be that easy, but that is the theory behind it. I know it has to be a lot quicker than the system that is in now, and of course you know when we are talking about dumping, illegal dumping and all that kind of stuff, one of the biggest problems that we have in the country today and which Superfund was addressing, is illegal dumping of hazardous chemicals and hazardous wastes.

What does it call for in the Superfund? They are talking about a $100 billion problem, $100 billion. We are talking about peanuts when we are talking about all of this, and what we are trying to do is help to prevent some of that happening in the future, and at the same time provide adequate safety to not only the fire forces but also the communities and the people who live within that area.

Ms. McCormick. I agree with that in many ways. I do have to point out that most Superfund sites came about with practices before the implementation of the Resource Conservation and Recovery Act, and those that have come about since then were the result of, usually in the early eighties, poor enforcement and understanding of those laws. But we have Superfund sites that go back many, many, many years and predate current activities, so I am a little hesitant to compare apples and oranges in the pre-RCRA Superfund sites and the current management practices of the wastes.

Mr. Applegate. Yes. Well, that is true, and I can understand that, too, but I just thought it would be a proper analogy at this point.

I really don't have anything else. I appreciate you all coming and feeding us some information. That is very important. We hope that maybe between all this, with all of this testimony that we had and with the good graces of our chairman—who, incidentally, I want to commend and compliment very, very highly for holding these hearings, because I think it is something that has been very necessary and something that has been long overdue to be addressed, so I really want to say in all honesty that I commend you and compliment you for holding these hearings——

Mr. Anderson. You might tell them that you have asked me at least 10 or 12 times. [Laughter.]

Mr. Applegate. That's true, but it worked.

Mr. Anderson. OK. Well, thank you, George Berg and Elizabeth McCormick and Barry Massey, for an excellent presentation.

[The prepared statements of Mr. Berg, Ms. McCormick, and Mr. Massey follow:]

AMERICAN FARM BUREAU FEDERATION
[illegible]
[illegible]

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION
TO THE SUBCOMMITTEE ON SURFACE TRANSPORTATION
OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
U.S. HOUSE OF REPRESENTATIVES
REGARDING PROPOSALS TO AMEND THE HAZARDOUS MATERIALS
TRANSPORTATION ACT

Presented By

George L. Berg, Jr., Assistant Director
National Affairs Division

May 25, 1988

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION TO THE SUBCOMMITTEE ON SURFACE TRANSPORTATION OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION U.S. HOUSE OF REPRESENTATIVES REGARDING PROPOSALS TO AMEND THE HAZARDOUS MATERIALS TRANSPORTATION ACT

Presented By

George L. Berg, Jr., Assistant Director
National Affairs Division

May 25, 1988

The American Farm Bureau Federation (AFBF) is the nation's largest general farm organization representing more than 3.6 million member families. Our members produce virtually every commercially-produced commodity grown in this country, and we are committed to addressing the problems of farm and ranch families. Anhydrous ammonia is used extensively as a fertilizer by American farmers. Therefore, we are very much concerned by the Department of Transportation's proposal to reclassify anhydrous ammonia from a non-flammable gas to a poisonous gas.

The purpose of the DOT proposal is to amend the Hazardous Materials Regulations (HMR) to incorporate features found in the United Nations Committee of Experts Recommendations on the Transport of Dangerous Goods (U.N. Recommendations) and the Technical Instructions for the Safe Transport of Dangerous Goods by Air of the International Civil Aviation Organization.

Farm Bureau adopted the following policy at our annual meeting in January, 1988: "We support the classification of anhydrous ammonia as a corrosive gas and the labeling thereof." We have filed comments with the Research and Special Program Administration of the U.S. Department of Transportation urging that DOT reclassify anhydrous ammonia as a corrosive gas, which is identical to the classification adopted by Canada. In doing so, Farm Bureau believes that the adoption of such a classification would more accurately reflect the characteristics of the product; would be consistent with Canada, our largest trading partner in anhydrous ammonia; and would not cause significant economic disruption in the U.S. farm sector.

It should be emphasized that the U.S. is the world's largest producer and exporter of corn, which is a nitrogen-intensive crop. Anhydrous ammonia is the lowest cost form of nitrogen for corn production and has been safely used for many years. In 1960, the average yield per acre was 55 bushels of corn. In 1987, the average yield was 120 bushels. According to U.S. corn producers, this boost in yield is attributable in part to their use of anhydrous ammonia.

The U.S. has a well-developed infrastructure to produce and distribute anhydrous ammonia. There are 20 U.S. companies with a total of 44 manufacturing plants which make anhydrous ammonia.

There are approximately 5,000 anhydrous ammonia retailers throughout the U.S. serving farmers. This infrastructure is especially well-developed through the corn producing areas where nearly all of the one million-plus farmers use direct application of anhydrous ammonia. More than 90 percent of U.S. corn is produced in 17 states.

In addition to the broad issue of farmer profitability and agricultural infrastructure concerns, a focus on the specific cost-impacts should also be considered. Reclassification of anhydrous ammonia from a non-flammable gas to a poison gas would dramatically impact fertilizer shipping rates, insurance costs, safety, marketing and establishing an environment spawning overregulation of the product.

A few brief examples are as follows: A reclassification to a poison gas would produce higher transportation rates which would ultimately result in higher production costs for the U.S. farmer. Obtaining insurance at reasonable rates for shipping fertilizer materials would be a challenge for the agricultural community, if the insurance is available at all. We cannot be sure what the increase in rates would be if the class change were implemented, but if the limits of liability were increased, a conservative estimate of 20 percent would add an annual cost of $90 million to an industry already struggling to survive.

Federal, state and local restrictions for hazardous materials are keyed for product classification. If anhydrous ammonia were classified as a poison gas, it would come within the scope of many state routing laws and could be prohibited from transport through many jurisdictions. The psychological impact of a poison gas classification for an anhydrous ammonia would be devastating to the agricultural industry.

In summary, agriculture is the nation's largest industry. Farm assets totaled $771 billion on December 31, 1986. The nation's food and fiber system accounted for 17.5 percent of total gross national product in 1985. Agriculture is also the nation's biggest employer. About 21 million people work in some phase of agriculture -- from growing food and fiber to selling it in the supermarket. Farming itself employs roughly 2.7 million workers, as many as the combined work forces of transportation, the steel industry and the automobile industry combined.

As the nation's largest general farm organization in the United States, Farm Bureau strongly opposes the reclassification of anhydrous ammonia by the Department of Transportation.

Farm Bureau also petitioned the Federal Highway Administration on January 27, 1988, requesting that farmers and ranchers with farm license plates on their trucks and who drive their trucks less than 15,000 miles per year be exempt from the newly enacted commercial driver's license requirements. Drivers of farm vehicles are affected by the commercial driver requirements because some of their vehicles weigh more than 26,001 pounds GVWR, and many of the vehicles are used to transport chemicals in the amount that require a placard.

Farm Bureau believes farmers should be exempt from the Commercial Driver's License Program because they do not consider themselves to be commercial drivers. While we do appreciate the objectives in the Act in regard to safety on the highways, we do not feel that the potential abuses of commercial vehicle operators intended to be regulated by the Act are applicable to operators of farmer owned trucks used solely to haul agricultural supplies and products. Unlike the motor carrier operators, farm truck operators normally operate their vehicles on short, local trips during daylight hours. They generally drive less than 15,000 miles a year, far less than the heavy mileage logged annually by the commercial motor vehicle operators, who drive all hours of the day and night, seven days a week.

Under the provisions of the Motor Vehicle Safety Act of 1986, every farmer, spouse, hired personnel, son or daughter who transports any kind of hazardous chemical material from the supply store to the farm will be required to have a commercial driver's license. Many farmers operate very small enterprises, some are part-time farmers and their hazardous needs are small and seasonal. According to the most recent agricultural census, only 55 percent of U.S. farmers were solely engaged in full-time farming. The remaining 45 percent were part-time farmers. It is also estimated that 1.4 million or 62 percent of the total 2.3 million U.S. farmers had farm sales of under $20,000 during 1985. Obviously, many of these farmers would not use substantial amounts of agricultural chemicals or fertilizers on their farms. Therefore, we believe that requiring all U.S. farmers to have a commercial driver's license would be substantial hardship and not in the best public interest.

Many states provide an agricultural vehicle registration class which restricts the use of the vehicle to not for-hire hauling of agricultural supplies and products. Farm Bureau policy recommends that farmers with farm plates on their trucks or who drive their trucks less than 15,000 miles per year be exempt from the newly enacted commercial driver licence requirements.

Again Mr. Chairman, the American Farm Bureau Federation would like to thank you for the opportunity to express our concerns regarding the anhydrous ammonia issue and the commercial driver's license act.

NSWMA
National Solid Wastes Management Association

atement
on behalf of

the National Solid Wastes Management Association
Chemical Waste Transportation Council

Elizabeth McCormick, Chair

before

House Public Works and Transportation Committee Subcommittee
on Surface Transportation

May 25, 1988

1730 Rhode Island Ave. NW, Suite 1000, Washington, DC 20036 (202) 659-4613

Mr. Chairman, members of the Subcommittee, my name is Elizabeth McCormick. I am testifying on behalf of the National Solid Wastes Management Association, the national trade association representing 2800 firms in the private waste services industry. I am also the chair of NSWMA's Chemical Waste Transportation Council (CWTC). The Council serves as a forum for issues specific to the transport of hazardous waste. Members of the Council are commercial firms that have responsibility for transport of hazardous waste, by truck and rail, from its point of generation to its management destination. It is the only organization of its kind that represents companies engaged in hazardous waste transportation. We welcome the opportunity to share our views about the reauthorization of the Hazardous Materials Transportation Act.

In order to appreciate our concerns with some of the proposals before this Subcommittee on the reauthorization of Hazardous Materials Transportation Act, it is important to put into perspective who we are and how we as an industry fit into the communities you represent and in transportation generally. Only 4 percent of all hazardous wastes generated are managed off the site of generation. In terms of the total amount of hazardous materials moved, hazardous waste accounts for less than 1 percent. However, our services are vital not only to large generators who, for whatever reason, do not want to take on the management of hazardous waste streams themselves, but also to every community that has a dry cleaner, auto body shop, photography development, and other small quantity generators who do not have the option to dispose of their wastes on-site. Furthermore, we haul the material removed by remedial cleanup of abandoned toxic waste sites.

The volume of regulated waste material (<1%) we move does not reflect our true participation in the nation's transportation system particularly that dealing with motor carriage. For example, in its latest Truck Use and Inventory Survey, the US Census Bureau reported that 6.8 percent of the miles traveled by vehicles transporting hazardous materials involve toxic wastes. Such wastes were carried by about 5 percent of the total number of trucks that transport all hazardous materials. These data reflect the fact that (1) hazardous waste transportation is an interstate operation because of the limited number of permitted management facilities to which the wastes can be properly delivered, (2) most hazardous waste is currently transported by truck although inroads are being made by rail, and to some degree (3) many of the vehicles we use, such as roll-off boxes and dump trailers, cannot be loaded to their full capacity without violating bridge weight standards.

The number of trucks we run and the miles we travel is not insignificant. For comparison, we operate almost 40 percent as many vehicles as does the chemical industry and travel over half as many miles. Yet, we boast an excellent safety record. According to

US/Department of Transportation (US/DOT) data, less than 1 percent (0.5%) of all reported hazardous materials release incidents on the highway involve releases of wastes. Moreover, hazardous wastes, for the most part, are dilute materials, much less toxic and harmful to public health and the environment than virgin chemicals or other pure hazardous materials.

Despite this safety record, hazardous waste transporters have been the focus of regulatory activity. We have been registered, permitted, taxed, routed, and otherwise subjected to many of the legislative "solutions" being proposed to reduce the risk associated with hazardous materials transportation. With this experience in mind, let me share with you our main concerns about the various proposals before you.

Registration/Permitting

Since the Resource Conservation and Recovery Act was enacted in 1976, hazardous waste transporters have had to register with US/Environmental Protection Agency (US/EPA) to obtain an identification number. The US/EPA registration program, in our opinion, is virtually meaningless. The registration is a one-time affair with no attempt to update registrants or periodically review capability for fitness to transport.

In addition, many states require specific permits to haul hazardous waste in their jurisdictions. Some state permitting schemes go to the opposite extreme of US/EPA by requiring fingerprinting and other disclosures that raise Constitutional questions of privacy without providing any functional benefit to public safety. The business and safety records of companies do not justify these extremes.

Because of the current situation, the Council urges some form of registration program at the Federal level. Such a registration program should:

- apply to all modes of hazardous material transport;
- preempt duplicative state requirements;
- defer US/EPA transporter registration to US/DOT authority;
- be renewal based, perhaps every three years;
- include a showing of financial responsibility; and
- be tied to some safety/fitness review.

Funding and Emergency Response

With the advent of the Community-Right-to-Know provisions of P.L.99-499, there has been debate about how to finance those activities and emergency response. Some have suggested a tax or fee on the transport of hazardous material. In this regard, you will be interested in the results of a survey the Council conducted last year to determine the extent of fees, taxes and other capital assessments being levied by states on hazardous waste transporters.

- Thirty states assess some type of fee on the transportation of hazardous waste. This compares with five states that levy fees for hazardous materials transport.

- Between calendar year 1985 and fiscal year 1987, more than $4 million was collected through the 30 state taxing authorities. This figure does not include costs associated with various state bonding requirements.

- The primary use to which those funds were applied was "general revenues" followed by deposit to a state "hazardous waste cleanup program."

- In the ten year period covering 1977-1986, US/DOT reported 577 incidents involving hazardous waste transportation. This represents 0.5 percent of all hazardous materials incidents during the same period.

- The reported dollar damage from these incidents was $2.95 million.

The message supported by these data should be obvious. There is little relationship between the fees collected and the actual risk imparted. In the Council's opinion, fees should not serve as a barrier to market entry or be diverted to uses unrelated to improving safety in the transport of regulated materials, such as general revenues or emergency response at fixed facilities. Still, it is premature to institute such fees and assessments prior to a thorough study of the risks presented, existing response capabilities, and the development of a plan to make best use of resources available.

Routing

The Council shares the concern of many that the ad hoc imposition of routing restrictions merely as a barrier to "undesirable traffic" is unwarranted and potentially increases the danger to public health and property. Hazardous waste is often the bears the brunt of routing restrictions while shipments of equal or greater hazard such as gasoline, home heating oil, paints, pesticides and cleaners, have open access to communities. No jurisdiction should be able to completely prohibit community access of hazardous materials transportation whether it be by truck or rail. If routing restrictions are undertaken, they should be based on technically relevant and objective Federal criteria. State and localities should be compelled to use this criteria if they choose to restrict routes.

US/DOT has suggested criteria which the Council believes, with a few modifications, should form the bases of any routing scheme. This criteria should:

- limit routing to placarded loads;
- provide for enforcement;

- provide for posting and maps of routes and alternatives available, including a central repository for all such routing plans;
- provide for public hearings and other due process protections to include all interested parties, public and private, not just contiguous states or political subdivisions;
- provide for free, direct access to commerce;
- provide for breaks in on-road movement for food, fuel, driver duty status, periodic vehicle inspections, etc; and o be based on physical limitations (e.g., bridge weight limit/tunnel clearance), public safety risk calculation (e.g., accident probability and accident consequence), special populations factors (e.g., heavily populated areas, hospitals, schools, nursing homes, other areas difficult to evacuate), special properties (e.g., reservoirs), and accessibility of emergency response equipment and personnel in the event of an incident.

Prenotification

The CWTC is opposed to prenotification of routes and/or cargo. Prenotification has been examined by US/DOT and the Congressional Office of Technology Assessment (OTA). Both have indicated that it does not enhance transport safety. OTA concluded in its 1986 report, Transportation of Hazardous Materials, that such information is "neither feasible nor cost-effective ... and (that) its utility for emergency response is questionable." Keep in mind that, especially with waste, it is usually the vehicle -- not the cargo -- that will result in damages in case of an accident.

As mentioned above, reported accident rates for vehicles carrying hazardous waste are far below the accidents rates for all vehicles carrying hazardous materials. Moreover, no death involving hazardous waste vehicles has been attributed to the waste itself. Prenotification is not seen as a method that can predict accidents or releases with any degree of accuracy commensurate with the compliance burden it would entail. Efforts to reduce risks before they happen should focus on packaging and containment requirements, and driver quality.

Federal Role

None of the foregoing recommendations can be achieved unless the US/DOT has clear, controlling authority over the transportation of hazardous materials. Currently,
the Department's process of determining the consistency or inconsistency of state or local requirements with Federal policy is inadequate. Decisions are "advisory" and as a result often do not mitigate protracted litigation on disputes. US/DOT should have primacy in all aspects of hazardous materials, including waste, transportation in the areas of packaging, placarding and marking, driver qualifications, container classification, inspections, prenotification, and routing.

In order for the Federal government to adequately and accurately fulfill its primacy role, it must have access to information about the industry it intends to regulate. The US/DOT should undertake a thorough ongoing analysis of accident data to identify and target locations of potential high risk. If hazardous waste incidents were reviewed, for example, no hazardous waste incidents were reported from five states between 1977 and 1985. Only 4 states reported more than 3 incidents per year, and no states had more than 6 incidents per year. These statistics compare to data that show there were over 100 hazardous materials incidents in each of 10 US Postal Service three-digit zip code area during 1985 alone.

Dovetailing with Community-Right-To-Know requirements of P.L.99-499, the Department should also endeavor to determine hazardous material flow and existing emergency response systems capabilities. This information will aide in prioritizing attention to those materials presenting the greatest risk in transportation, such as explosives or materials toxic by inhalation.

Enforcement

A suggestion the Council would place before the Subcommittee is a recommendation to your colleagues on the House Judiciary Committee. It deals with hazardous materials shipment tampering. Environmental crime has tremendous possibilities and is reportedly an area of concern to law enforcement agencies. We believe it should be a felony to tamper with cargos that are placarded. The major surety we can provide the public about the safety of our operations is the diligence placed on proper containment of hazardous materials transported. The threat of these materials to the public arises only after containment has been breached. To deter those who would vandalize such shipments by subjecting such individuals to a severe criminal standard is far better than dealing with the potential harm that could result from the unauthorized release of hazardous materials to the environment.

Hazardous Materials Include Hazardous Waste

In conclusion, the Council is supportive of strict regulation that recognizes relative risk of hazardous waste to public health and the environment. Without such regulation, we would not exist as an industry. However, hazardous waste is often singled out for more intense scrutiny or regulation simply because it is waste. This trend is most prevalent at the state level. While we can sympathize with public concerns about risks presented by waste material, the irony is that these regulations do not cover hazardous products. Wastes certainly are no more dangerous than the pure products from which they are derived.

Historically, Federal regulation of hazardous materials in transit has included hazardous waste. With two exceptions --the Uniform Hazardous Waste Manifest and the requirement to obtain an identification number mentioned earlier -- the US/EPA defers to US/DOT's hazardous materials rules and regulations. This was done in the Agency's words 'to satisfy its statutory obligation to promulgate regulations which are necessary to protect human health and the environment in the transportation of hazardous waste... (and to) avoid the establishment of duplicative or conflicting requirements with respect to these matters." Within US/DOT, hazardous waste has been successfully integrated into the hazardous materials regulations.

Hazardous waste is not the stepchild of hazardous materials transportation. Except for the Uniform Manifest, those who transport hazardous waste should be expected to comply with the same -- not more or less -- safety and enforcement standards as those set for hazardous materials.

Thank you for the opportunity to testify on the reauthorization of the Hazardous Materials Transportation Act.

TESTIMONY

ON BEHALF OF

THE NATIONAL INDUSTRIAL TRANSPORTATION LEAGUE

BEFORE

SUBCOMMITTEE ON SURFACE TRANSPORTATION

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

UNITED STATES HOUSE OF REPRESENTATIVES

ON

REAUTHORIZATION OF THE HAZARDOUS MATERIALS TRANSPORTATION ACT

MAY 25, 1988

Chairman Anderson, Members of the Subcommittee:

Good afternoon, my name is Barry Massey. I am manager - Hazardous Materials, Materials and Logistics Department, E. I. du Pont de Nemours and Company, Wilmington, Delaware. I am appearing today on behalf of The National Industrial Transportation League.

The League is a voluntary association of shippers, shippers' associations, boards of trade, chambers of commerce, and other entities concerned with the purchasing of transportation services. It is the only nationwide organization representing shippers of all sizes and commodities using all modes of transportation to move their goods in intrastate, interstate, and international commerce. Its members, directly or indirectly, are responsible for the routing of about 80 percent of the nation's commercial freight.

The League long has been involved with the issues surrounding the transportation of hazardous materials, and is dedicated to ensuring the safe and efficient movement of these potentially dangerous, but essential, commodities.

It supported enactment of the 1974 Hazardous Materials Transportation Act, and believes that the Act is working well. However, based on our members' experiences, we believe that the time has come to make certain refinements which should enhance the safety and efficiency of the current system.

As have many of the witnesses who appear today, the League has been very active in the efforts to forge a consensus between the public and private sectors on how best to resolve the division of regulatory authority between the federal and state and local governments, while at the same time, improving safety and assuring adequate emergency response capability.

Today, I would like to outline the types of reforms which best meet the twin goals of improved safety and efficiency, and generally comment on how hazardous materials legislation pending before your subcommittee, particularly H.R. 4069, H.R. 4153, and H.R. 3334, meets these goals. In addition, the League is preparing a more detailed statement on the merits and flaws of these bills, and will be submitting it for the hearing record.

In outlining these reforms, the highest priority item for our members is untangling the jurisdictional web between federal and state and local governments. We firmly favor a federally based, uniform system of laws and regulations, since state and local requirements frequently tend to be uncoordinated, and, in some cases, unilateral. This lack of coordination not only impedes the efficient movement of these commodities, it often adds to the safety risks involved in transporting hazardous materials.

The League believes that state and local governments do have a role to play in assuring the safe movement of hazardous commodities. Their views should be given serious consideration in the federal regulatory process. When unique state or local problems arise, they are best resolved at that level of government. Therefore, the federal system should allow for exceptions to its general rules and requirements, perhaps using a system similar to the current Department of Transportation exemption process. When conflicts between federal and state and local entities cannot be resolved, the DOT should be the final arbitor.

Two important parts of this jurisdictional debate are the issues of routing and prenotification. At present, DOT has authority to regulate routing, and has exercised it over the highway transportation of radioactive materials. The League believes that there is a need for further federal routing guidelines or standards for certain high hazard commodities, such as poison inhalation hazard materials and explosives, to preclude state and local requirements which could diminish safety and impede the efficient movement of these commercially vital commodities. Once federal standards are in place, states and localities should not be allowed to impose inconsistent requirements.

The League also believes that routing restrictions need to be based on proven need and sound safety considerations. They should be limited to the specific materials posing the risk. If disputes or problems arise in interpreting or administering the standards, they should be resolved by DOT based on the federal requirements with notice and opportunity for comment by the affected parties including shippers and carriers. The public interest is not served by routing requirements where problems are transferred from one jurisdiction to another without adequate consideration of the safest possible way to conduct the transportation at issue.

Enforcement of routing requirements is most effectively accomplished through highway inspections and related enforcement activities. The League strongly believes that paperwork retention rules have no measurable impact on improving highway safety. We also agree with recent reports and studies which found that prenotification rules would not enhance safety, and would place substantial burdens on shippers, carriers, and the administrating agencies.

In meeting these objectives, we believe that H.R. 4069 is a good vehicle and warrants subcommittee support. However, we would urge that several improvements be included if we are to fully meet shippers' needs in this important transportation debate.

Specifically, we believe that the definition of "imminent hazard" should be retained as currently written. If it is to be amended, there at least should be a reasonable likelihood that serious harm will occur prior to the completion of an administrative hearing. We believe that to retain the definition as currently proposed would provide insufficient guidance to the Department of Transportation, and could promote confusion and uncertainty.

With respect to the scope of DOT's authority, we support its extension to intrastate matters. We also would urge that the ambiguity be eliminated about whether the department has a right to control rail shipments. We believe that it has the right to oversee all hazardous materials shipments. We also would urge the bill clearly state that DOT's preemption authority extends to manufacturing hazardous materials packages and containers. This clarification is needed to prevent any unwarranted state or local interference.

While the League sees no useful purpose in requiring the same sort of highway routing requirements for the rail industry, we believe that the rail authority is needed to prevent a strict reading of the word "highway." We are concerned that such a reading could result in an interpretation which would allow state and local entities to consider this matter within their purview.

In addition, we would urge that routing restrictions requirements provide for input from shippers and carriers, and this input be made early in the route selection process. We believe that this is the best way to improve safety without disrupting the efficient flow of these commercially important commodities.

Another point of concern to League members is the modification to the standard for assessing civil penalties. We believe that the word "knowingly" is an important protection, and its deletion could have the effect of exposing to these penalties individuals who believe they are acting responsibly. If modification is needed, we would prefer the standard requires that a person reasonably should have known that he or she was in violation of the law.

A final point of concern affects the requirement for registration or permitting of high risk commodities, but that will be addressed later in this testimony.

As noted in the Office of Technology Assessment's study, one of the biggest barriers to effective public policy in the transportation of hazardous materials is the lack of good data on the flow of these commodities throughout the nation.

Before any major new safety initiatives are undertaken, the League believes that better information is needed on identifying the flow patterns of these commodities. The resulting data will not only help in assuring better public planning, it also will be an important tool in allocating resources to assure maximum public safety.

In seeking this data, the League would urge that inquiry have a clear purpose and time limit, as well as require the development of recommendations for implementation by the Congress and the DOT. It should include input from shippers, carriers, all levels of government, and other interested parties. It also should consider carefully the current information available from DOT, EPA and OSHA, right to know laws, and the requirements of SARA's Title III.

In addition, it should: differentiate between rail and truck shipments, because while rail patterns are relatively defined, truck patterns vary; assure the confidentiality of commercially sensitive data; consider flows from a historic as well as current basis; and, based on safety and economics, define patterns leading to an ideal flow.

Another important step in filling this informational void deals with the current allocation of public and private sector emergency response capabilities and training efforts. The League does not disagree with the contention that emergency response training and equipment may be needed in various areas and localities across the nation. However, there is a definite need to know how current resources are being expended and where gaps, if any, are occurring.

In any such needs assessment, the League believes the following issues must be addressed: the level of risk posed as determined by the flow study; the level of training needed to meet those risks; and, the availability of existing training programs offered by the various levels of government and by the private sector and its trade groups such as Chemical Manufacturers Association, American Petroleum Institute, and others. This latter information is vital to assuring that there is no duplication of existing resources.

In connection with these concerns, we believe that H.R. 4153, Hazardous Materials Transportation Information Act of 1988, represents a good first step in gathering this type of data so that effective public policy planning can be undertaken. However, the League would recommend one improvement to this bill. We urge that its scope be limited to placarded bulk commodities. Extending this endeavor beyond these commodities would be extremely costly and would produce little additional benefit.

In connection with this effort, the League believes that consideration should be given to enactment of federal Good Samaritan legislation. Such a law would shield persons and companies who voluntarily respond to a hazardous materials incident from ordinary liability exposure. However, it would still leave them subject to liability for gross neglience and for reckless, wanton, or intentional misconduct.

The law's benefit is that it would allow greater use of existing private sector resources, and place less of a burden on public sector resources. At present, many companies are becoming increasingly concerned about the liability they could incur in any litigation resulting from responding to a hazardous materials incident. By insulating them from common or casual liability exposure, they would be able to render timely assistance without concern about frivolous and costly court suits.

Perhaps the most controversial issue in the current debate is the need for and scope of any fund financing hazardous materials equipment and emergency response training. While the League, in principle, is not opposed to a fund, it has serious concerns about implementing one at this time.

The lack of reliable information on commodity flows as well as on the scope of current response and training efforts gives us no sound basis for moving forward in this area. The League would strongly urge that this information be compiled and analyzed so that actual need can be determined prior to the creation of any fund. In addition, the League would caution that in creating any fund, care is needed to assure that it does not become another way for state and local governments to raise revenues without having to spend those monies on their intended purpose.

Another controversial issue in this debate is registrations and permits. The League would note that while the Department of Transportation currently has authority to establish a registration program, it has chosen not do so.

The League believes that requiring the registration of all hazardous materials shippers, carriers, and container makers at this time would serve no useful purpose and waste scarce federal resources. It also believes that prior to the implementation of any such program, DOT should be directed to determine the potential benefits including the enhancement of safety, emergency planning, and enforcement.

With respect to H.R. 4069, the League would not oppose adoption of its registration provisions, since they are limited in scope and are meant to address the most potentially dangerous of these commodities. However, we share the Hazardous Materials Advisory Council's concern about the exact wording of the applicable commodities as well as about ensuring that any resulting fees or reporting requirements are fair and reasonable.

It also would caution that such a registration or permit system should not be viewed as a replacement for strong enforcement of existing safety regulations. In our view, enforcement is a key element in enhancing safety and assuring compliance with existing rules and regulations.

With respect to requirements for transportation equipment, the League does not believe that legislation is the appropriate vehicle for determining the technical designs and specifications of the packages and containers used to transport hazardous materials.

We believe that these matters are more properly addressed through the current DOT regulatory process. This process provides timely, qualified consideration of the highly specialized issues involved in package and container design and performance. We support continuing DOT review to assure safe transportation of these commodities, and strengthening current requirements, where appropriate, for high risk goods.

In addition, there is another bill pending before your subcommittee which is of great concern to League members -- H.R. 3334, Hazardous Materials Transportation Amendments of 1987. While we agree with the intent of improving information flow, we believe that the measure will needlessly add to transportation costs without any appreciable improvement in safety. Because of its expertise in this area, we believe that Chemical Manufacturers Association's criticisms of this proposal should be given serious consideration.

In conclusion, the League believes that, on balance, the Hazardous Materials Transportation Act has, and is, working well. However, additional reforms are needed to enhance the safe and efficient movement of these commodities. Specifically, the League would recommend enactment of H.R. 4069 and H.R. 4153 with its suggested improvements, and no further action on H.R. 3334 until careful further study and analyses are made.

The League appreciates this opportunity to present the views of the shipping community, and looks forward to working with you and your staff on the important issue of promoting the safe and efficient movement of hazardous materials. I now would be happy to answer any questions you may have.

Mr. Anderson. Our final witness, William H. Dempsey, president of the Association of American Railroads, was here, but had to leave. I have his statement, and I would like to have that inserted in the record. Without objection, so ordered.

[The prepared statement of Mr. Dempsey follows:]

SUMMARY OF THE STATEMENT
OF THE
ASSOCIATION OF AMERICAN RAILROADS

My name is William H. Dempsey. I am president of the Association of American Railroads. We in the railroad industry are pleased at this opportunity to describe the excellent safety record of the railroad industry, our safety programs, and our views on proposed legislation pending before the Subcommittee.

In 1987, there were fifty releases of hazardous materials from accidents, representing less than six releases for every 100,000 carloads of hazardous materials transported by rail. For the seventh straight year we can report that there were no deaths due to the transportation of hazardous materials by rail during the previous twelve months. The statistics show clearly that the railroad industry is succeeding in its effort to ensure that hazardous materials are transported safely.

The railroads are not resting on the safety record. Rail operations involve risks and it is our responsibility to minimize the risks, reduce the number of accidents, and be prepared to respond quickly and efficiently when accidents occur. The railroad industry has a number of programs to accomplish these goals.

We are devoting significant resources to training programs aimed at enhancing the capabilities of transportation, shipper, and public emergency response personnel. At its Transportation Test Center in Pueblo, Colorado, the AAR offers training programs on tank car safety, personal protection and safety, hazardous materials spill control, inland oil response, and radiological response. There have been over 2,500 students from fire departments, local, state, and federal agencies, railroads and chemical companies. The AAR's training program is recognized as the leader in training responders to hazardous materials releases from rail derailments.

Individual railroads also have extensive emergency response training programs for state and local fire fighters, and police. Each year over ten-thousand people attend these training sessions.

The railroad industry is ensuring that proper information is available to emergency responders. The AAR publishes one of the most widely used publications on hazardous materials emergency response, Emergency Handling of Hazardous Materials in Surface Transportation. This publication, which many fire departments use, contains information useful for the initial response to an emergency. Complementing this publication is the Industrial Chemical Accident Response Information System, a computerized data base containing information useful to emergency response personnel faced with complex spill problems.

The principal means of transporting hazardous materials by rail is the tank car. Although major changes have been made in the tank car fleet, considerable attention is being devoted to improving tank cars. Numerous research efforts are under way, including the development of brittle failure resistant steels for tank car shells and methods for reducing leaks from tank car pressure relief devices. The AAR's Tank Car Committee continues to review and set standards for tank cars, consistent with DOT's regulatory program.

The railroad industry continues to be concerned with unwarranted state and local interference with hazardous materials transportation. State and local restrictions hinder the safe transportation of hazardous materials by rail. Despite strong federal preemption in the hazardous materials area provided by the Federal Railroad Safety Act and the Hazardous Materials Transportation Act, states and localities continue to impose counterproductive restrictions on the transportation of hazardous materials by rail. It is time for Congress to amend the Hazardous Materials Transportation Act to clearly provide that it is the federal government which has the responsibility to regulate the transportation of hazardous materials by rail.

Numerous bills on the transportation of hazardous materials are before this Subcommittee. My written remarks contain detailed comments on some of the proposals. We share the concern of the sponsors of some of those bills that adequate training for emergency responders be available, that emergency responders be given the infromation they need, and that tank cars be built to stringent specifications. As my testimony indicates, the railroad industry on its own is addressing these areas.

Mr. Chairman, the railroad industry's hazardous materials programs demonstrate the importance the railroad industry attaches to the safe transportation of hazardous materials. The resources currently devoted to safety programs ensure that hazardous materials will continue to be transported in the safest manner possible.

Thank you.

STATEMENT OF WILLIAM H. DEMPSEY, PRESIDENT
OF THE ASSOCIATION OF AMERICAN RAILROADS
BEFORE THE
SUBCOMMITTEE ON SURFACE TRANSPORTATION
HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

HEARINGS ON THE REAUTHORIZATION
OF THE
HAZARDOUS MATERIALS TRANSPORTATION ACT

May 25, 1988

My name is William H. Dempsey. I am president of the Association of American Railroads, a non-profit association representing all the major freight railroads in the United States. I appreciate this opportunity to present the railroad industry's views on the bills relating to the transportation of hazardous materials which are pending before the Subcommittee and, in that regard, to describe the excellent safety record of the railroad industry and the dedicated programs under way that will ensure continued safe transportation of hazardous materials by rail.

I. The Railroads' Safety Record

Recent years have shown a dramatic improvement in rail safety. The improvement is reflected in virtually every category of accident statistics. From 1978 to 1986 there was a thirty-four percent reduction in the number of railroad related fatalities, a sixty-seven percent reduction in the number of railroad employee lost time injuries, and a seventy-six percent reduction in train accidents. The increased effort and attention railroads have been devoting to improved railroad facilities, maintenance, and safety programs have yielded welcome safety benefits.

Hazardous materials statistics confirm that the railroads' safety record is bright. In 1987, the railroads transported over 1,300,000 carloads of hazardous materials, plus a comparable amount of additional "empty" cars containing residues of hazardous materials. There were only fifty releases from accidents in 1987, representing less than five releases for every 100,000 carloads of hazardous materials. In addition, for the seventh straight year we can report that there were no deaths in the previous year due to the transportation of hazardous materials by rail. Thus, the statistics clearly show that the railroad industry is succeeding in its effort to ensure that hazardous materials are transported safely.

II. Emergency Response

The railroads are not resting on their safety record. Rail operations inherently involve some risk. A totally accident-free railroad environment is desirable but not achievable, so the industry must be prepared to respond to hazardous materials releases. Unlike the situation for some other modes, rail accidents occur on railroad property and railroads bear responsibility for taking appropriate emergency response measures. It is thus important for the railroad industry to continuously review and improve its emergency response capability. In recent years the industry has initiated several new emergency response programs that enhance the ability of industry and government personnel to respond to releases of hazardous materials.

A. Training.

In 1985, the AAR began to offer hazardous materials training programs at its Transportation Test Center near Pueblo, Colorado. To date, we have offered classes on tank car safety, personal protection and safety, hazardous materials spill control, inland oil spill response, and radiological response. There have been over 2,500 students from fire departments, local, state, and federal agencies, railroads and chemical companies. In addition to classroom training, students in these courses respond to simulated derailments resulting in leaking liquids, burns, explosions, and the emission of toxic fumes. The AAR's training program is only three years old, but the AAR is already recognized as the leader in training responders to railroad hazardous materials releases. It is our expectation that a large number of individuals from industry and government will be trained at the Test Center.

The Test Center's training program is just a small, albeit important, part of the railroad industry's training program. Individual railroads have extensive training programs. They conduct emergency response training sessions for state and local fire fighters, police, and other personnel. Each year over ten-thousand people attend these training sessions, which run from one hour to two days. AAR hazardous materials specialists located in different parts of the country also provide training of local emergency response personnel.

One railroad, the Union Pacific, has initiated with Dow Chemical an emergency response program called "TRANSCAER."

TRANSCAER is based on the Chemical Manufacturers Association's "Community Awareness and Emergency Response" (CAER) program. As part of this program, Dow and the UP conducted a full-scale one day emergency response drill at Angleton, Texas, a community which is a major hazardous materials center. The drill involved city and county agencies, the school system, a hospital, etc. The results of the Angleton exercise are being used to develop a community awareness program for use in other communities, especially smaller ones.

In a related effort, AAR and the Chemical Manufacturers Association (CMA) are also helping communities develop emergency response programs. As a first step, a videotape on the emergency response needs of communities is scheduled for release in June.

The AAR, CMA, and the Railway Progress Institute have formed the "Inter-Industry Task Force on the Safe Transportation of Hazardous Materials By Rail" to improve chemical transportation safety. The Task Force has compiled a list of over eighty audio/visual hazardous materials programs, eighteen of which are specifically directed towards emergency response training. Furthermore, four videotapes focusing on different aspects of tank car safety have been developed. The videotapes instruct chemical plant personnel, railroad train crews, and railroad mechanical inspectors on specific aspects of tank car safety.

Several hundred copies of these tapes have been distributed to chemical companies and railroads.

The Task Force also reviews public safety and preparedness programs. One public awareness program is jointly offered by the AAR, CMA, American Trucking Associations, and the General Federation of Women's Clubs. This program is an effort to develop community interest in emergency planning. The program distributes to interested parties brochures on emergency response planning measures communities should take and hazardous materials resources available to communities.

B. Information for Emergency Responders.

The AAR publishes one of the most widely used publications on hazardous materials emergency response, Emergency Handling of Hazardous Materials in Surface Transportation. Every hazardous material in DOT's Hazardous Materials Table is listed individually in this publication. For each material there is information useful for the initial response to an emergency. Emergency Handling is unique in its listing of information by specific commodity. Other publications provide information by categories instead of specific materials. Many fire departments have obtained a copy of Emergency Handling either by purchasing it from the AAR or through railroad company programs in which copies are distributed free of charge.

Over the last few years the AAR has developed the

Industrial Chemical Accident Response Information System (ICARIS). ICARIS is a computerized data base containing detailed information on 142 hazardous materials, representing more than 98% of the volume of hazardous materials transported in tank cars. ICARIS complements the AAR's Emergency Handling of Hazardous Materials in Surface Transportation by providing more detailed emergency response information to be used beyond the initial response stage. For each chemical ICARIS contains general descriptive information, chemical properties, potential health and environmental hazards, and emergency response information.

ICARIS has been used in a number of hazardous materials incidents in the United States, Canada, and Europe. The AAR is planning to make ICARIS available to the 1,000 railroads and shippers with access to the AAR's extensive computer network.

Another recent development is the publication by the AAR of "Emergency Action Guides." Currently, there are guides for 172 chemicals. Each six-page guide contains commodity specific information describing the chemical and methods of responding to spills of the chemical. Over six-thousand sets of these guides have been distributed since 1985.

Finally, pursuant to an FRA contract, the AAR has developed a model emergency response plan for railroads entitled, "Hazardous Material Emergency Response Plan for

Railroads." Individual railroads also have plans. The railroads' emergency response plans, training programs, and information systems demonstrate that the railroads are well prepared for hazardous materials emergencies.

III. Tank Cars

Tank cars are the predominant vehicle used for transporting hazardous materials by rail. To assure that appropriate safety levels are maintained for those cars, the AAR and the Railway Progress Institute have jointly funded since 1972 a research program called the "Railroad Tank Car Safety Research and Test Project." One ongoing project is the collection of data on tank car accidents to be used for research purposes. Another project of the research program, which is being conducted under the direction of the AAR's Tank Car Committee, is the development of specifications for new steels for tank car shells that have improved brittle failure resistance.

The Research and Test Project also conducted the studies which showed the effectiveness of and led to the specifications for shelf couplers, thermal insulation, and head shields. Shelf couplers resist disengagement in a derailment and prevent the accidental "spearing" of a tank car by an adjacent car. Head shields also protect against spearing, and thermal insulation is designed to protect a tank car from heat which might be generated in an accident. All tank cars which were to be retrofitted with these safety innovations now have them. The Office of Technology Assessment (OTA) noted in its report, Transportation of Hazardous Materials, that these tank car modifications "have greatly improved the safety of bulk movements of hazardous materials by rail."

The AAR's Tank Car Committee sets requirements for the construction, maintenance, and safe operation of tank cars. The requirements, of course, are consistent with federal regulations. DOT has delegated to the Committee the responsibility for approving applications for the construction and modification of tank cars. The Committee also inspects and approves facilities engaged in the construction, modification, or repair of tank cars.

The Tank Car Committee is constantly evaluating ways to enhance the safety of the transportation of hazardous materials in tank cars. We've already mentioned research into the development of new brittle failure resistant steels for tank car shells. In addition, the Committee is investigating methods for reducing leaks from tank car pressure relief devices; improvements in existing steels used for tank car shells; improvements for attachments welded to tank car shells; and protection for bottom fittings on tank cars transporting hazardous materials classified by DOT as "other regulated materials."

The FRA is currently reviewing the Tank Car Committee's performance in areas that have been delegated by DOT to the

Committee. We are confident the review will show that the Committee has performed with distinction.

IV. Data Collection

Data on safety of hazardous materials transportation is necessary for government and industry to focus their research and safety programs on the most critical areas. As OTA noted in its report, railroads and the AAR are already collecting substantial information on hazardous materials transported by rail. The railroad industry assigns unique Standard Transportation Commodity Codes (STCC) to each hazardous material. STCC numbers are used whenever a commodity is transported by rail, enabling accurate recordkeeping and data collection. Furthermore, in 1987 the system was enhanced by the adoption of separate STCC codes for hazardous wastes, allowing more refined records to be kept on hazardous waste shipments.

The AAR also maintains a hazardous materials incident file dating from 1973. We will continue to maintain this file, an excellent source of information that can be utilized to detect recurring problems that need to be addressed.

V. Problems with the Current Regulatory Scheme

The railroad industry continues to be concerned with unwarranted state and local interference with hazardous materials transportation. The interstate nature of rail transportation demands a uniform regulatory scheme and total federal preemption. Yet, the rail industry still faces efforts by state and local governments to impose restrictions on the transportation of hazardous materials by rail. State or local restrictions can have several effects: (1) they hinder rail transportation, perhaps to the point where hazardous materials are diverted to other, less safe modes; (2) they increase the transit time for hazardous materials and thereby increase the time during which an incident can occur; (3) they increase the handling of hazardous materials cars, thereby creating a greater potential for an accident; and (4) they export the actual transportation of hazardous materials to other jurisdictions, thus inviting a battle between neighboring jurisdictions over hazardous materials transportation.

As one court recently stated when overturning state hazardous materials laws, "it is clear that Congress intended to establish uniform national rail safety standards."[*] Despite the strong federal preemption in the hazardous materials area provided by the Federal Railroad Safety Act and the Hazardous Materials Transportation Act, however, states continue in attempts to impose unreasonable and counterproductive restrictions on the transportation of hazardous materials by rail. Unfortunately, the railroads, the federal government, and the courts must spend an inordinate amount of time overturning these restrictions. It is time for Congress to amend HMTA to clearly provide that there is no role for the states in the regulation of the transportation of hazardous materials by rail.

---

[*] Missouri Pacific R.R. et al. v. Railroad Comm'n of Texas et al., Civ. No. A-86-CA569, slip op. at 8 (W.D. Tex. 1987).

At the same time we suggest that the process by which preemption ("inconsistency") decisions are rendered by DOT be strengthened. Under the current system and even under the amendments to the Hazardous Materials Transportation Act proposed by DOT, state regulations remain in effect while DOT is in the process of determining that they are preempted. Also under current law, parties can seek de novo decisions in court during and after DOT preemption proceedings. We strongly urge that the preemption process be changed so that: (1) DOT preemption findings are binding after a specified period of time for appealing them has elapsed; (2) state and local requirements be prohibited from being enforced while there are ongoing DOT preemption proceedings; and (3) once a preemption proceeding is initiated at DOT, there be a prohibition on parties seeking a preemption determination in court until after the conclusion of the DOT proceedings, if the DOT proceedings are concluded within a specified period of time (e.g., 180 days).

Another concern of the railroad industry are measures to assue that transporters be informed when they are offered hazardous commodities for transportation. At our behest, Congress inserted a provision in the Superfund Amendments and Reauthorization Act of 1986 (SARA) ensuring that DOT exercise its authority under the Hazardous Materials Transportation Act to require shippers to notify transporters when tendering commodities designated as Superfund hazardous substances. If Congress had not done so, there would have been the potential for a hazardous substance being spilled without anyone immediately recognizing what had happened, thereby magnifying the chances for a major occurrence. The same problem exists with respect to commodities designated as "extremely" hazardous substances under SARA. Neither Congress nor DOT has required shippers to notify transporters when tendering extremely hazardous substances. EPA, however, recently stated that it will be designating all SARA extremely hazardous substances as Superfund hazardous substances. The designation of SARA substances as Superfund substances would automatically trigger the current requirement that transporters be notified whenever a shipper tends a Superfund hazardous substance for transport. We hope EPA takes this action in the near future.

Proposed Legislation

Numerous bills affecting hazardous materials transportation have been introduced in the House and referred to the Public Works and Transportation Committee. Many of these bills overlap and address the same issues. Rather than addressing the particular bills, I will discuss the various proposals in them that the AAR finds particularly troublesome.

Emergency Response Procedures

One proposal is to require DOT to issue emergency response procedures for rail carriers. The procedures would require that copies of train consists and waybills (shipping papers), which contain information on hazardous materials cars in a train, be provided to local emergency response personnel in emergencies, and that railroad employees provide assistance to local emergency response personnel. This proposal is unnecessary because individual railroads already have emergency response programs. Furthermore, the AAR, as we stated previously, has prepared a plan entitled, "Hazardous Materials Emergency Response Guidance Document."

The waybill and consist information referred to is carried on each train and shows the identity and location of each car carrying a hazardous material or a hazardous material residue. Railroad personnel do provide this waybill and consist information to local officials and give other needed assistance to local emergency response personnel when accidents occur. In fact, the AAR's emergency response guidance document specifically requires that when an accident occurs, railroads notify public officials and work with these officials until the officials declare the incident closed. A requirement that duplicate shipping papers be on a train so that one copy can be given to government officials, as opposed to just making the papers available to them, would serve no useful purpose because of the number of different government organizations that often are present at the scene of a derailment.

Retrofitting Tank Cars

Another proposal would prohibit the use of any railroad tank car built before November 6, 1971, to transport hazardous materials unless the tank car met all safety standards promulgated since that date. This suggestion is most confusing. There have been countless changes to the tank car safety standards since 1971. Steel specifications, for example, change periodically. Are tank cars to be discarded every time a steel specification is changed? It also would be unreasonable to require tank cars to meet all changed specifications for parts of tank cars. If every time the specification for a plug or a manway cover was changed existing tank cars had to be modified, there would be a shortage of tank cars due to the inordinate amount of time that would be spent on modifying tank cars (plugs and manway covers are actual examples of specifications changed since 1971).

It is our understanding that the authors of this retrofit requirement are concerned about the events that occurred in 1986 in Miamisburg, Ohio. On July 8, 1986, a phosphorus tank car derailed. A hole was torn in the tank by a tubular brake support welded to the shell. Since 1969, the AAR has prohibited the direct welding of supports to the shell for new tank cars except for very small supports, but this tank car was constructed in the 1960's (in 1971 DOT, in response to an AAR petition, also prohibited the direct welding of supports). The retrofit requirement that has been proposed was introduced to ensure that older tank cars were modified so that releases could not be caused by supports breaking off from tanks. The AAR's Tank Car Committee, however, is now requiring that cars with the tubular brake support welded to the shell be modified so that in a derailment the tubes would break off before a rupture occurs. Thus, the objective of the retrofit requirement in H.R. 2056 is already being accomplished and legislation is unnecessary. It should be emphasized that insofar as other tank car improvements are concerned, older tank cars are required to be modified when necessary.

Tank Car Design Approval Process

Another proposal would require a study of the tank car design approval process. This study requirement is based on a misunderstanding. The findings sections in one bill in which this requirement is found state that DOT is not permitted to attend sessions of the AAR's Tank Car Committee where tank car designs are analyzed and evaluated. Tank car designs usually are not discussed at meetings of the Tank Car Committee. Instead, designs are reviewed by Committee members at their home offices and voting on the approval of designs is done by mail. It would be impractical to wait for meetings to vote on designs due to the volume of applications for approval of designs, the

BEST AVAILABLE COPY

time required to scrutinize detailed drawings and the infrequency of Tank Car Committee meetings. DOT, it should be emphasized, has a standing offer to participate in the approval process even though we do not believe that DOT participation in the time consuming and mechanical process of design approval would be beneficial to DOT.

A study of the tank car design process would duplicate an effort currently underway by DOT to audit the tank car design approval process. This audit encompasses all aspects of the process by which an applicant gains approval of individual tank car designs, and has the full support and cooperation of the AAR.

Routing Requirements

There are several proposals concerning the routing of radioactive waste and other hazardous materials. The premise of these proposals is that it is beneficial to route shipments of nuclear waste and hazardous materials around urban areas because fewer people would be potentially exposed to a derailment. Safety considerations, however, often result in the conclusion that it is better to move trains through urban areas than to avoid them. Due to the volume of traffic, track through urban areas is often of a higher quality than other track. Routing to avoid the most heavily populated areas would often result in vast increases in the amount of time a shipment spends in transportation, which is counter to the commonly held belief that the less time a hazardous material shipment spends in transportation, the better. In addition, such a routing policy often would increase the frequency with which rail cars containing hazardous materials must be interchanged between rail carriers and "switched" in train yards. This increased handling of rail cars containing hazardous materials is also counterproductive if the objective is to minimize the chances of an accident occurring. Thus, routing to avoid urban areas might increase the degree of exposure.

In a section-by-section analysis of proposed amendments to the Hazardous Materials Transportation Act, sent to Congress by DOT on July 29, DOT states:

> The routing of railroad shipments of hazardous materials has been the subject of a number of studies. Based on those studies we have concluded that, absent vast and impractical restructuring of the nation's rail system, efforts to make nationwide changes in rail routing (*e.g.*, routing hazardous materials away from heavily populated areas) would not improve safety.

Thus, routing proposals cannot be justified.

One proposal would actually give a city the power to block nuclear waste shipments. Such legislation would surely set cities against neighboring jurisdictions. The resulting strife cannot be justified on public policy grounds.

Licensing of Transporters of Radioactive Materials

It has been proposed that transporters of spent nuclear fuel and high level radioactive waste be licensed by DOT. To obtain a license for the transportation of nuclear waste, a transporter would have to submit an emergency response plan, a hazard assessment for the proposed transportation route and an analysis of available alternative routes, and information on the need for transporting the nuclear waste.

The licensing requirements are in some cases unclear, and in other cases, inappropriate. Addressing the requirement for an emergency response plan first, a plan would be required to contain medical procedures, decontamination procedures for the public and emergency response personnel, and cleanup procedures. While there is no question that these aspects of the emergency response plan are important and should be developed prior to the transportation of spent fuel and radioactive waste, it is unrealistic and counterproductive to impose on the transporter the obligation to develop the emergency response plan. Of all the "players" involved in shipments of nuclear materials, the transporter has the least expertise regarding potential problems posed by spent nuclear fuel and radioactive waste. Spent nuclear fuel and radioactive waste will never constitute a significant percentage of a railroad's business. Experts should be responsible for the emergency response plan contemplated, and the required expertise is possessed by government and shippers, not railroads.

The requirement that the transporter demonstrate the need for transporting the radioactive waste or spent fuel is also inappropriate. Transporters merely provide transportation services. Transporters do not decide what to ship, when to ship, or to whom to ship. Those decisions are made by shippers and consignees. Transporters, under their common carrier obligation, must ship radioactive materials wherever shippers tell them to. It makes no sense, therefore, to require transporters to demonstrate the need for a shipment.

The proposal that hazard assessments of routes be required is not practical. Given the paucity of railroad accidents and the impregnability of casks, any hazard assessment would show that the risk a rail route posed would be minimal. Hazard assessments are premised on the assumption that alternative routes can be demonstrated to be safer. As we showed previously, rerouting rail shipments has not been demonstrated to enhance safety.

State Regulation of the Transportation of Radioactive Materials

Bills have been introduced that would permit states to require permits, the payment of fees designed to pay the cost of nuclear safety transportation programs, the reporting of accidents, prenotification, and the use of certain routes. We have already addressed routing. State permits and fees serve no useful purpose and can be used to block shipments of nuclear wastes or divert them to neighboring jurisdictions. If the transportation of nuclear wastes is closely regulated by the federal government, what reason could there be for a state permit? Railroads are already subject to the accident reporting requirements of the Federal Railroad Administration, the Research and Special Program Administration, the Environmental Protection Agency, and the National Transportation Safety Board. State accident reporting requirements would merely duplicate the already duplicative federal requirements. Finally, states are already notified in advance of shipments of commercial spent nuclear fuel. Duplicative state requirements are again unnecessary, and could prove to be very burdensome if each and every locality a railroad passes through must be notified.

Railroad transportation is interstate in nature and appropriately subject to federal, not state, regulation. Nuclear waste also is a national, rather than a state, problem. There is no justification for state regulation of the transportation of nuclear waste by rail. State regulation would be burdensome and not protect the public.

Registration

It has been proposed that carriers register with DOT. Registrants, in some versions, would be required to maintain descriptions of routes used for certain hazardous materials. It is difficult to envision how registration would apply to railroads. Registration itself serves no purpose insofar as railroads are concerned, since it is quite clear who railroads are and where they operate. Insofar as routes are concerned, so much of the railroad trackage that exists is used for hazardous materials that route descriptions serve no useful purpose. The amount of hazardous materials railroad maintenance of way vehicles transport on highways for use in railroad operations is so small that a recrod of movement would only serve to create a jungle of paper work so tangled that records could never be extracted. Moreover, there would never be a reason to want such records.

Training of Emergency Response Personnel

Bills have been introduced calling for a hazardous materials fund to be used for funding the training and equipment needs of emergency response personnel. One version of the fund calls for financing the fund through a .1 cent tax on gasoline, diesel, and aviation fuel. This tax would raise approximately $100 million a year, over three million dollars of which would come from the railroad industry. Another version proposes that money be raised through a per ton tax on shipments of hazardous materials. The proposals envision that money from a fund would be distributed to states and localities.

Sufficient evidence does not exist to support the institution of the proposed hazardous materials funds. It is true that the Office of Technology Assessment in its report, Transportation of Hazardous Materials, found that emergency responders are not being trained adequately for emergencies involving hazardous materials. OTA, however, did not study in detail the amount of training that should be given to emergency responders and the amount of training currently given. Such a study certainly should be done prior to the initiation of a program of the size contemplated by the funding proposals before the Committee. Furthermore, OTA did not have the time or attention to focus on specific modes. We are confident that if OTA had been able to examine railroad programs in the communities in which railroads operate, OTA would have been satisfied with the training efforts of the railroad industry.

In a 1986 report to Congress, DOT and the Federal Emergency Management Agency identified 412 courses available on hazardous materials emergency response. There clearly is a large number of training courses available and a considerable amount of training being accomplished. There is certainly no basis for a conclusion that the training currently available for emergency responders is inadequate.

A fundamental premise of supporters of a hazardous materials fund is that those being taxed should be paying more to support state and local emergency response programs. This premise is unsupportable insofar as the railroad industry is concerned. As evidenced by the extensive hazardous materials programs already in place in the railroad industry, it is expending substantial resources on hazardous materials programs. A taxing scheme diverting railroad resources from existing programs could well be counterproductive.

Proponents of taxes have asserted as a rationale that transportation companies do not contribute to the coffers of the states or localities in which they operate even though these governments must be prepared for transportation incidents. That rationale is patently not applicable to the railroads, however, who pay real property taxes imposed on rail yards and rights-of-way, and personal property taxes on rails, crossties and other railroad equipment. In fact, in areas where rural fire protection districts have taxing authority, railroad taxes go directly to fire departments.

Even if justification for a tax existed, the proposed taxes would be inequitable. The fuel tax would be imposed on all railroad diesel fuel and thus would affect all railroad traffic. Only four percent of railroad traffic is hazardous materials traffic, however. Why should shippers of coal, grain, and other non-hazardous commodities support a hazardous materials program?

Similarly, a tonnage tax bears no relation to the threat posed by hazardous materials shipments. Railroads transport hazardous materials in rail cars with much larger capacities than the motor vehicles or airplanes used by other modes. Therefore, more shipments are required to transport

BEST AVAILABLE COPY

large amounts of a commodity by highway or air than by rail. As the number of shipments increases, so does the chance that an accident will occur. A tonnage tax ignores the number of shipments of hazardous materials. A tonnage tax, moreover, would be expensive to administer.

Given the resources devoted by the railroad industry to emergency response programs, the amount of state and local taxes being paid by railroads, and the industry's safety record, we do not believe any case exists for requiring additional contributions from the railroads in support of a hazardous materials fund.

Information Requirements

It has been proposed that all hazardous materials shipments be accompanied by DOT emergency response guidebooks or the equivalent. Railroads currently include on shipping papers computer generated, commodity specific information for the hazardous materials in a train, or include emergency response information on an accompanying chart. These systems enable railroads to avoid having publications of the nature proposed in locomotives. Because the relevant emergency response information is already available on trains, the proposed requirement would be superfluous.

We also should point out that DOT has an ongoing rulemaking proceeding in which DOT is examining whether there should be further requirements concerning the information that must accompany hazardous materials shipments. It would be appropriate to leave the resolution of this issue with DOT since it possesses expertise in this area and is developing an extensive administrative record.

Certified Training

It has been proposed that railroads be required to offer hazardous materials training courses certified by DOT to its employees. This section ignores the current training programs of the railroads discussed at length earlier. Railroad employees are trained to carry out their roles in hazardous materials emergencies. Train crews are prepared to take the steps necessary if a derailment occurs. Hazardous materials specialists possess the expertise needed to actually control hazardous materials releases. We are not aware of any shortcomings in the railroads' training programs. This section is not only unnecessary, it is actually counterproductive in that valuable administrative resources would be diverted to an unnecessary certification program.

Notification of Shipments

It has been proposed that DOT establish a computer based system containing information on hazardous materials shipments that emergency response personnel in the field could access through computers. The proposed system would contain the identity of the commodity in each hazardous materials shipment, the appropriate means of response, and other information. An examination of information currently available to emergency response personnel shows the lack of need for such a computer system.

There are several ways in which emergency response personnel can immediately determine the commodity in a rail car. Placards and panels are required for shipments of hazardous materials cars and contain information indicating the hazard class of the material in a car (e.g., "Poison Gas") and a UN identification number. The UN identification number is tied to a DOT emergency response guidebook which, for each number, contains information on the hazards posed by the commodity and the appropriate emergency response measures. All local emergency response personnel possess this guidebook.

In addition, each train has shipping papers indicating the hazardous materials transported, their DOT hazard classes, and the appropriate UN identification numbers. Railroad shipping papers also contain emergency response information for the hazardous materials in the train. In addition, railroads keep track of shipments by computer and their employees are readily available to provide information on a shipment. The AAR's own detailed book on hazardous materials is owned by many emergency response personnel. Another source of information on hazardous materials is CHEMTREC, the chemical industry's system for putting emergency response personnel into contact with knowledgeable chemical industry personnel.

Thus, a computer system containing basic emergency response information would be redundant. The local emergency response official currently has access to the information he needs to make the initial response to a hazardous materials accident. It is true that more detailed information would be useful to emergency response experts engaging in response techniques beyond the initial precautions taken to ensure the safety of those near an accident. Recognizing that experts do need an extensive amount of information, the AAR has developed a computer system containing appropriate information. This system, the Industrial Chemical Accident Response Information System or "ICARIS" (discussed earlier), provides information on toxicity, environmental effects, chemical characteristics, response techniques, etc. We must emphasize again that the information in the AAR's computer system is only useful to the hazardous materials emergency response professional.

Some of the proposals we have seen for a computer system envision a prenotification system where a computer could tell a locality ahead of time what hazardous materials will be coming through its area. There also has been legislation proposed that would require prenotification apart from any suggested computer system. The cost of prenotification would far exceed its practical value and would impose a substantial burden on the railroad industry. Railroads handle hundreds of hazardous material shipments every hour of the day. Frequently, railroads do not know in advance what materials they will be receiving from a shipper, a connecting railroad, or a trucking company. The requirements of advance notification would result in entire trains being held at interchange points or in yards pending notification. The delay of trains would be exceedingly costly and counterproductive from a safety viewpoint, as illustrated by current regulations which prohibit the unnecessary delay of hazardous materials cars.

As to the practical value of prenotification, advance notification of every shipment would not provide a community with any information upon which it could routinely act. In areas where there is a substantial amount of hazardous materials traffic, a prenotification system would result in communities being inundated with information they could not utilize. Means already exist for quickly identifying hazardous materials shipments. A prenotification system would add little, if anything, to the identification process.

According to RSPA Administrator Douglass, the establishment and operation of a computer system similar to what has been proposed would cost billions of dollars annually. Neither the government nor the carriers could possibly afford the costs of such a system.

Enforcement

We strongly oppose proposals to remove the requirement in the Hazardous Materials Transportation Act (HMTA) that an act in violation of the HMTA be committed "knowingly" before DOT can issue a citation. These proposals evidently originated with proposed HMTA amendments sent to Capitol Hill last summer by the Department of Transportation. The justification DOT offers for this amendment is insufficient.

In Southern Railway v. Riley, No. C84-1990A (N.D. Ga. 1986), appeal dismissed, No. 87-8060 (11th Cir. 1987), it was held that a person has "knowingly" violated a regulation promulgated pursuant to HMTA if he knows of the violation or has a duty to inquire into the facts of the situation creating the violation and willfully neglects that duty. In the section-by-section analysis that accompanied its bill, DOT stated that the court's holding conflicts with Congressional intent. DOT further stated that the court's interpretation of "knowingly" would detrimentally impact its safety program. DOT and Southern Railway fully briefed the Southern Railway court on these issues. The court rejected DOT's assertions, including DOT's view of what Congress intended.

It is unnecessary to replicate here the lengthy arguments set forth in the briefs in the Southern Railway case. We should note, however, that DOT's proposal would result in an inequitable enforcement program. Citations for unknowing actions could be unjust since many of the hazardous materials regulations require shippers to take certain actions which, if not taken, could result in railroads being in violation of the HMTA through no fault of their own. For example, when a shipper gives a railroad a tank car containing a hazardous material, the shipper must prepare the shipping paper correctly and ensure that the tank car complies with DOT regulations. If the shipper does not take these steps, it would be absurd to penalize the railroad the moment it takes possession of the tank car and, unknowingly, places it in the wrong position in a train. Yet, that is what could happen if "knowingly" is deleted. Congress had solid reasons to impose penalties only for "knowing" violations of HMTA regulations and those reasons are still valid. For thirteen years the "knowingly" standard has been understood by the regulated community and has been an effective enforcment tool. DOT's attempt to overturn a well reasoned court decision reviewing the HMTA's enforcement standard should be rejected.

DOT also proposed to amend the civil penalty section of HMTA by giving DOT the authority to issue civil penalties for violations of DOT compliance orders, in addition to violations of DOT regulations or provisions of HMTA. This proposal is puzzling, because DOT already has the authority to impose penalties for violations of compliance orders. Under section 109 of HMTA, compliance orders may be issued to a person found to have violated a provision of HMTA or DOT regulations. A violation of a compliance order, then, is a violation of HMTA or the regulations themselves, and, therefore, HMTA's penalty section can be used for violations of compliance orders. (It also should be noted that section 109(a) of HMTA authorizes the Attorney General to seek judicial enforcement of orders.) Since the amendment proposed by DOT is unnecessary, we urge that at most, Congress confirm in report language that anyone violating HMTA or the regulations, including compliance orders, can be cited under HMTA's civil penalty section.

Mr. Chairman, the railroad industry has made great strides in hazardous materials transportation. The safety record in the 1980's reflects the tremendous resources we have devoted to safety programs. We are proud of our record and believe that our ongoing safety programs will ensure that hazardous materials are transported safely and efficiently.

Mr. Anderson. In addition to that, I was informed that any Member who has any questions for Mr. Dempsey, if they will submit for the record their questions, they will be submitted to him in writing and he will answer them.

If there is nothing more, this concludes our hearings on this subject. The record will remain open for several weeks so that anyone who wants to submit matters for the record may do so. At this time the subcommittee stands adjourned.

[Whereupon, at 6:40 p.m., the subcommittee adjourned.]

ADDITIONS TO THE RECORD

American Petroleum Institute
1220 L Street, Northwest
Washington, D.C. 20005
202-682-8185

V. Kenneth Leonard
Transportation Director

June 23, 1988

The Honorable Glenn M. Anderson
Chairman
Subcommittee on Public Works and Transportation
Committee on Public Works and Transportation
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

The American Petroleum Institute (API) is pleased to provide a statement for the hearing record on the issue of hazardous materials transportation.

API is a national trade association with a membership of over 200 companies involved in all aspects of the oil industry, including the refining, transportation and marketing of petroleum products. The delivery of the most familiar of these products, gasoline, accounts for approximately 40,000 to 50,000 truck deliveries a day -- deliveries which reach every city and town in the United States.

Gasoline represents the most frequently transported hazardous material, accounting for almost half of all such materials transported by highway, according to the 1986 Office of Technology Assessment (OTA) report entitled, "Transportation of Hazardous Materials." Because of the sheer volume of gasoline deliveries by truck -- over 110 billion gallons per year -- and the delivery and use of more than 300 million gallons a day throughout the nation, the public is far more familiar with gasoline than with other hazardous materials. By the same token, the familiarity and knowledge of the product by public safety officials means that emergency response to an incident involving the transport of gasoline or other light oil products by tank truck is usually carried out safely and correctly.

The OTA report acknowledges that "...most emergency response personnel are adequately trained to fight petroleum fires." Nonetheless, the report concludes, additional safety measures and awareness and training programs for drivers and handlers to reduce the incidence of accidents should be developed. API agrees with OTA's conclusion. While more than 15 million truck deliveries of gasoline are accomplished safely each year, several hundred cargo tank truck incidents do occur annually. The number of incidents can be reduced and our member companies are working toward that objective. We offer the following comments in response to congressional concerns over hazardous materials transportation and in response to the legislation before you.

An equal opportunity employer

The safe transportation of gasoline and all petroleum products by highway, rail, water and pipeline is of primary concern to API. Since enactment of the Hazardous Materials Transportation Act (HMTA) over a decade ago, API has played an active role in development of regulations under the Act, in the call for stronger enforcement of the regulations, and more recently, in the call for improvements and refinements to the Act.

Clear, consistent and uniform regulation of hazardous materials transportation benefits all parties -- the public, local and state governments, emergency response personnel, shippers and carriers.

API and its members strongly support this concept. We believe that congressional action on the items outlined below -- and highlighted throughout our statement -- will greatly improve hazardous materials transportation. We encourage:

(1) Amending the Hazardous Materials Transportation Act (HMTA) and establishing uniform hazardous materials regulations nationwide;
(2) State adoption of federal hazardous materials transportation regulations and state enforcement of those regulations;
(3) Establishing a statutory federal basis on which to judge the validity or consistency of state and local hazardous materials regulations with national regulations;
(4) Issuing federal routing standards for state use in designating highway routes for the transportation of hazardous materials; and,
(5) Developing information and training programs.

Hazardous Materials Regulatory Uniformity:

Federal, state and local governments share responsibility for protecting life and property from the inherent risks associated with the transportation of hazardous materials. While the federal government has the responsibility for regulating interstate transportation and intrastate transportation affecting interstate commerce, states retain jurisdiction over strictly intrastate matters.

The ill-defined boundaries of federal, state and local jurisdiction for hazardous materials transportation have resulted in the passage of conflicting laws and regulations at the state and local level. Many of these laws and regulations have not enhanced transportation safety. When one community bans hazardous materials transportation through its jurisdiction without consulting either the industries affected by the ban or the citizens of the communities to whom new risks will be transferred, safety may not be enhanced. Congressional guidance is needed to ensure that local and state laws increase safety and lower the risks associated with transportation. State and local governments must have clear guidelines to determine when -- and if -- they can institute traffic bans, routing and time of day restrictions, permits, licenses, fees, and requirements for prenotification of hazardous materials shipments.

H.R. 4069 clearly defines the specific roles of each level of government for hazardous materials transportation. Specifically, the legislation gives the federal government exclusive jurisdiction for promulgating regulations in such areas as container design specifications and manufacturing, shipping paper requirements, placarding, and the marking and labeling of transportation containers. Such regulation of hazardous materials transportation must be uniform on a national basis.

State Adoption and Enforcement of Federal Regulations

API strongly supports enforcement of the federal hazardous materials regulations by both federal authorities and the states. Uniform state enforcement of the existing federal regulations on all transporters of hazardous materials will alleviate many of the public's concerns over the safety and API supports the use of federal funds, such as the Motor Carrier Safety Assistance Program, to help states train state law enforcement officials to conduct roadside truck inspections and enforce existing hazardous materials transportation regulations on all trucks.

We also support the Office of Hazardous Materials funding request for Fiscal Year 1989. The funding level will enable the federal government to continue assisting the states in developing hazardous materials enforcement and emergency response capabilities. As pointed out in the OTA report, "consistent, strong enforcement of hazardous materials regulations is a major accident prevention tool."

However, we are concerned that the deletion of the word "knowingly," as proposed in H.R. 4069, from the Hazardous Materials Transportation Act will prove troublesome. The existing law requires that — in order to be charged with a violation -- such a violation must have been "knowingly" committed. Deletion of the word means that any violation, no matter how minor or what the reason for it might have been, may be subject to severe fines and civil penalties.

Statutory Basis for Comparing Federal and State Regulations

The Department of Transportation (DOT) needs a statutorily mandated process for determining whether state or local regulations over hazardous materials transportation are at variance with federal requirements. The existing DOT process for reviewing state and local ordinances is purely advisory. Therefore, it is neither binding on parties nor subject to court challenge.

The process created under H.R. 4069, will enable DOT to exercise greater leadership by allowing it to review those state and local ordinances which appear to be inconsistent with the federal regime -- before private parties are forced to seek judicial relief from those ordinances.

Federal Routing Guidelines for State Use

Many of the existing inconsistency cases between the federal government and the states could be avoided if federal highway routing guidelines were available to state and local jurisdictions. However, API does not endorse the concept of routing *per se*.

Routing is one of many tools available to the government for promoting the safe transportation of hazardous materials. Because routing tends to transfer risks to adjoining communities and increase transportation costs, such routing should be used only when other mechanisms have proven inadequate for safety purposes.

State and local jurisdictions will continue to pass routing restrictions in the absence of federal guidelines. A congressional mandate to issue federal routing guidelines, as found in H.R. 4069, would bring uniformity to local routing decisions. By providing localities with specific factors that must be considered if routing is selected over other mechanisms to promote safe transportation, ill-conceived, unilateral routing ordinances will be discouraged. This is true particularly if consultation with adjacent jurisdictions and with all parties affected by the proposed routing regulations is required under the federal guidelines, or if the localities are required to consider the different degrees of product hazard when proposing routing.

API strongly supports the section in H.R. 4069 giving the secretary of transportation the authority to resolve disputes between or among states arising from routing. The resolution process should be open, thus providing input from political subdivisions within the states, as well as from businesses affected by routing restrictions.

Training and Information Programs

The risks associated with the transportation of hazardous materials can be reduced by better personnel training and information. All transportation workers, emergency responders and the public at large can benefit from additional training and information.

The congressional mandate under the Motor Vehicle Safety Act requiring DOT to issue minimum federal testing and licensing standards for individuals who operate commercial motor vehicles and transport hazardous materials will greatly enhance safety. API strongly supports the issuance of a single, national truck drivers license and additional testing requirements for all drivers who transport hazardous materials.

Emergency response personnel should receive information and training on identifying hazardous materials and their nature, and the form emergencies might take involving such materials. Emergency responders should be aware of special equipment or training that might be needed in an emergency, so that they can make provisions for its procurement.

Industry should provide information on these materials and cooperate with local governments and local emergency response agencies in disseminating this information and in providing training. Implementation of the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act) is institutionalizing much of this information-gathering process.

Under the law, information about local facilities and transportation routes to and from those facilities is being provided to emergency response commissions and emergency planning districts. With this information, emergency plans and training programs are being developed. The information provided to localities under Title III will improve community awareness and emergency preparedness.

Once communities document hazardous materials in their jurisdictions, the needs of emergency responders, firefighters, police and emergency medical personnel can be assessed. The federal government can provide guidance to states in helping localities assess preparedness and quantify training needs. Guidance is also needed in assessing appropriate emergency response training programs.

Currently, national standardized training guidelines for the scope and content of courses are being developed by the National Fire Protection Association for different levels of local emergency response and enforcement personnel. Once these training standards for public safety and private sector emergency first responders are issued, the federal government should help distribute them to state and local governments.

On a related matter, consideration also is being given to establishing a centralized reporting system to track the more than 500,000 shipments of hazardous materials a day. The proposed system would contain information on each shipment (commodity, origin, destination and emergency response information) and could be electronically accessed by response personnel. API strongly opposes a proposal to require information on all hazardous materials shipment to be electronically transmitted to a private entity for a fee. In the case of gasoline and other familiar petroleum products, this proposal would provide little, if any, added benefit in an emergency. The transmission of petroleum product delivery information to a central computer makes little sense, since most deliveries to retail outlets and other distribution points originate locally. Moreover, since most emergency responders are familiar with and trained to respond to petroleum product incidents, information provided by a centralized reporting system would not beneficial.

The cost of the proposal for gasoline shipments alone would be over one-half million dollars a day. If all hazardous materials shipments must be reported to this private entity, the cost would be $6 million a day. The need for such a computer system has not been demonstrated.

Summary

API urges Congress to reauthorize the Hazardous Materials Transportation Act by adopting H.R. 4069, with some modifications.

We wholeheartedly support the granting of sole authority to the federal government for regulations governing equipment used in transportation of hazardous materials and in the preparation of those shipments for commerce. If state and local governments adopt different rules governing hazardous materials transportation, compliance and safety certainly are not enhanced.

The issuance of routing guidelines by the federal government for state and local use recognizes concurrent jurisdiction for certain activities related to hazardous materials. H.R. 4069 strikes the right balance between national uniformity and state and local regulations.

API appreciates the opportunity to provide these comment to the committee. Overall, we believe H.R. 4069 offers needed solutions to many of the problems that have affected the transportation of hazardous materials transportation. We urge Congress to reauthorize the Hazardous Materials Transportation Act this session.

Sincerely,

V. K. Leonard

Air Transport Association OF AMERICA

1709 New York Avenue, NW
Washington, DC 20006-5206
Phone (202) 626-4000

May 25, 1988

Honorable Glenn M. Anderson
Chairman
Subcommittee on Surface Transportation
Committee on Public Works and Transportation
U. S. House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

Attached please find the comments of the Air Transport Association on legislation regarding the transportation of hazardous materials. We would appreciate your consideration of our views and inclusion of the statement in the hearing record on this subject.

We look forward to working with you and your staff as legislation develops.

Sincerely yours,

Bill

William J. Burhop
Senior Vice President
Government Affairs

enc.

JUN 2 7 1988

965
7-5-88

TRANSPORTATION OF HAZARDOUS MATERIALS

STATEMENT FOR THE RECORD
SUBCOMMITTEE OF SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
U. S. HOUSE OF REPRESENTATIVES

The Air Transport Association of America (ATA) is the trade and service organization of the U.S. scheduled airlines. We are pleased to offer comments in their behalf for the consideration of the Subcommittee in their deliberations on legislation regarding the transportation of hazardous materials.

The air carrier industry believes that federal regulation of the transportation of hazardous materials has benefitted travelers, shippers, and air carriers. The regulation of hazardous material shipments transported aboard aircraft has been successful because it is a responsibility that Congress has assigned the Federal Government to perform. Locating that responsibility in the U.S. Department of Transportation has meant that the air carrier hazardous material program has been uniformly conducted. Uniformity is of the utmost importance to air carriers. The airline industry operates in every state and U.S. territory, and each day performs over 19,000 flights. If states or localities were permitted to regulate the air transportation of hazardous material, the airline industry would be ensnarled by different and conflicting requirements. That situation would be extraordinarily inefficient and would in no way promote a safer national air transportation system.

In light of these considerations, we are pleased to note that the Administration bill, H.R. 4069, specifically preempts essential operational matters, such as classification and packaging of hazardous materials, from state and local regulation. That provision will enable DOT to continue to discharge its historic and exclusive role of regulating the air transportation of hazardous material.

One provision of H.R. 4069, however, causes us great concern. Section 7 of this bill would delete the requirement in the civil penalty provision of the Hazardous Materials Transportation Act that a violation be "knowingly" made before it could be penalized. The requirement that a violation of the law, and of the regulations promulgated under it, be knowingly made is essential for both equitable and practical reasons. We simply cannot scrutinize every cargo shipment that is presented to us. Indeed, in the case of U.S. mail, we cannot inspect what the Postal Service presents to us. Hence, it would be unrealistic and unfair to hold us responsible for knowledge that we do not have. For these reasons, we oppose deletion of the word "knowingly" from the civil penalty provision of the Hazardous Materials Transportation Act.

We look forward to working with the Committee as it develops its legislation on this important subject.

American Petroleum Institute
1220 L Street, Northwest
Washington, D.C. 20005
202-682-8185

V Kenneth Leonard
Transportation Director

June 23, 1988

The Honorable Glenn M. Anderson
Chairman
Subcommittee on Public Works and Transportation
Committee on Public Works and Transportation
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

The American Petroleum Institute (API) is pleased to provide a statement for the hearing record on the issue of hazardous materials transportation.

API is a national trade association with a membership of over 200 companies involved in all aspects of the oil industry, including the refining, transportation and marketing of petroleum products. The delivery of the most familiar of these products, gasoline, accounts for approximately 40,000 to 50,000 truck deliveries a day -- deliveries which reach every city and town in the United States.

Gasoline represents the most frequently transported hazardous material, accounting for almost half of all such materials transported by highway, according to the 1986 Office of Technology Assessment (OTA) report entitled, "Transportation of Hazardous Materials." Because of the sheer volume of gasoline deliveries by truck — over 110 billion gallons per year — and the delivery and use of more than 300 million gallons a day throughout the nation, the public is far more familiar with gasoline than with other hazardous materials. By the same token, the familiarity and knowledge of the product by public safety officials means that emergency response to an incident involving the transport of gasoline or other light oil products by tank truck is usually carried out safely and correctly.

The OTA report acknowledges that "...most emergency response personnel are adequately trained to fight petroleum fires." Nonetheless, the report concludes, additional safety measures and awareness and training programs for drivers and handlers to reduce the incidence of accidents should be developed. API agrees with OTA's conclusion. While more than 15 million truck deliveries of gasoline are accomplished safely each year, several hundred cargo tank truck incidents do occur annually. The number of incidents can be reduced and our member companies are working toward that objective. We offer the following comments in response to congressional concerns over hazardous materials transportation and in response to the legislation before you.

An equal opportunity employer

The safe transportation of gasoline and all petroleum products by highway, rail, water and pipeline is of primary concern to API. Since enactment of the Hazardous Materials Transportation Act (HMTA) over a decade ago, API has played an active role in development of regulations under the Act, in the call for stronger enforcement of the regulations, and more recently, in the call for improvements and refinements to the Act.

Clear, consistent and uniform regulation of hazardous materials transportation benefits all parties — the public, local and state governments, emergency response personnel, shippers and carriers.

API and its members strongly support this concept. We believe that congressional action on the items outlined below — and highlighted throughout our statement -- will greatly improve hazardous materials transportation. We encourage:

(1) Amending the Hazardous Materials Transportation Act (HMTA) and establishing uniform hazardous materials regulations nationwide;
(2) State adoption of federal hazardous materials transportation regulations and state enforcement of those regulations;
(3) Establishing a statutory federal basis on which to judge the validity or consistency of state and local hazardous materials regulations with national regulations;
(4) Issuing federal routing standards for state use in designating highway routes for the transportation of hazardous materials; and,
(5) Developing information and training programs.

Hazardous Materials Regulatory Uniformity:

Federal, state and local governments share responsibility for protecting life and property from the inherent risks associated with the transportation of hazardous materials. While the federal government has the responsibility for regulating interstate transportation and intrastate transportation affecting interstate commerce, states retain jurisdiction over strictly intrastate matters.

The ill-defined boundaries of federal, state and local jurisdiction for hazardous materials transportation have resulted in the passage of conflicting laws and regulations at the state and local level. Many of these laws and regulations have not enhanced transportation safety. When one community bans hazardous materials transportation through its jurisdiction without consulting either the industries affected by the ban or the citizens of the communities to whom new risks will be transferred, safety may not be enhanced. Congressional guidance is needed to ensure that local and state laws increase safety and lower the risks associated with transportation. State and local governments must have clear guidelines to determine when — and if -- they can institute traffic bans, routing and time of day restrictions, permits, licenses, fees, and requirements for prenotification of hazardous materials shipments.

H.R. 4069 clearly defines the specific roles of each level of government for hazardous materials transportation. Specifically, the legislation gives the federal government exclusive jurisdiction for promulgating regulations in such areas as container design specifications and manufacturing, shipping paper requirements, placarding, and the marking and labeling of transportation containers. Such regulation of hazardous materials transportation must be uniform on a national basis.

State Adoption and Enforcement of Federal Regulations

API strongly supports enforcement of the federal hazardous materials regulations by both federal authorities and the states. Uniform state enforcement of the existing federal regulations on all transporters of hazardous materials will alleviate many of the public's concerns over the safety and API supports the use of federal funds, such as the Motor Carrier Safety Assistance Program, to help states train state law enforcement officials to conduct roadside truck inspections and enforce existing hazardous materials transportation regulations on all trucks.

We also support the Office of Hazardous Materials funding request for Fiscal Year 1989. The funding level will enable the federal government to continue assisting the states in developing hazardous materials enforcement and emergency response capabilities. As pointed out in the OTA report, "consistent, strong enforcement of hazardous materials regulations is a major accident prevention tool."

However, we are concerned that the deletion of the word "knowingly," as proposed in H.R. 4069, from the Hazardous Materials Transportation Act will prove troublesome. The existing law requires that — in order to be charged with a violation -- such a violation must have been "knowingly" committed. Deletion of the word means that any violation, no matter how minor or what the reason for it might have been, may be subject to severe fines and civil penalties.

Statutory Basis for Comparing Federal and State Regulations

The Department of Transportation (DOT) needs a statutorily mandated process for determining whether state or local regulations over hazardous materials transportation are at variance with federal requirements. The existing DOT process for reviewing state and local ordinances is purely advisory. Therefore, it is neither binding on parties nor subject to court challenge.

The process created under H.R. 4069, will enable DOT to exercise greater leadership by allowing it to review those state and local ordinances which appear to be inconsistent with the federal regime -- before private parties are forced to seek judicial relief from those ordinances.

Federal Routing Guidelines for State Use

Many of the existing inconsistency cases between the federal government and the states could be avoided if federal highway routing guidelines were available to state and local jurisdictions. However, API does not endorse the concept of routing per se.

Routing is one of many tools available to the government for promoting the safe transportation of hazardous materials. Because routing tends to transfer risks to adjoining communities and increase transportation costs, such routing should be used only when other mechanisms have proven inadequate for safety purposes.

State and local jurisdictions will continue to pass routing restrictions in the absence of federal guidelines. A congressional mandate to issue federal routing guidelines, as found in H.R. 4069, would bring uniformity to local routing decisions. By providing localities with specific factors that must be considered if routing is selected over other mechanisms to promote safe transportation, ill-conceived, unilateral routing ordinances will be discouraged. This is true particularly if consultation with adjacent jurisdictions and with all parties affected by the proposed routing regulations is required under the federal guidelines, or if the localities are required to consider the different degrees of product hazard when proposing routing.

API strongly supports the section in H.R. 4069 giving the secretary of transportation the authority to resolve disputes between or among states arising from routing. The resolution process should be open, thus providing input from political subdivisions within the states, as well as from businesses affected by routing restrictions.

Training and Information Programs

The risks associated with the transportation of hazardous materials can be reduced by better personnel training and information. All transportation workers, emergency responders and the public at large can benefit from additional training and information.

The congressional mandate under the Motor Vehicle Safety Act requiring DOT to issue minimum federal testing and licensing standards for individuals who operate commercial motor vehicles and transport hazardous materials will greatly enhance safety. API strongly supports the issuance of a single, national truck drivers license and additional testing requirements for all drivers who transport hazardous materials.

Emergency response personnel should receive information and training on identifying hazardous materials and their nature, and the form emergencies might take involving such materials. Emergency responders should be aware of special equipment or training that might be needed in an emergency, so that they can make provisions for its procurement.

Industry should provide information on these materials and cooperate with local governments and local emergency response agencies in disseminating this information and in providing training. Implementation of the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act) is institutionalizing much of this information-gathering process.

Under the law, information about local facilities and transportation routes to and from those facilities is being provided to emergency response commissions and emergency planning districts. With this information, emergency plans and training programs are being developed. The information provided to localities under Title III will improve community awareness and emergency preparedness.

Once communities document hazardous materials in their jurisdictions, the needs of emergency responders, firefighters, police and emergency medical personnel can be assessed. The federal government can provide guidance to states in helping localities assess preparedness and quantify training needs. Guidance is also needed in assessing appropriate emergency response training programs.

Currently, national standardized training guidelines for the scope and content of courses are being developed by the National Fire Protection Association for different levels of local emergency response and enforcement personnel. Once these training standards for public safety and private sector emergency first responders are issued, the federal government should help distribute them to state and local governments.

On a related matter, consideration also is being given to establishing a centralized reporting system to track the more than 500,000 shipments of hazardous materials a day. The proposed system would contain information on each shipment (commodity, origin, destination and emergency response information) and could be electronically accessed by response personnel. API strongly opposes a proposal to require information on all hazardous materials shipment to be electronically transmitted to a private entity for a fee. In the case of gasoline and other familiar petroleum products, this proposal would provide little, if any, added benefit in an emergency. The transmission of petroleum product delivery information to a central computer makes little sense, since most deliveries to retail outlets and other distribution points originate locally. Moreover, since most emergency responders are familiar with and trained to respond to petroleum product incidents, information provided by a centralized reporting system would not beneficial.

The cost of the proposal for gasoline shipments alone would be over one-half million dollars a day. If all hazardous materials shipments must be reported to this private entity, the cost would be $6 million a day. The need for such a computer system has not been demonstrated.

Summary

API urges Congress to reauthorize the Hazardous Materials Transportation Act by adopting H.R. 4069, with some modifications.

We wholeheartedly support the granting of sole authority to the federal government for regulations governing equipment used in transportation of hazardous materials and in the preparation of those shipments for commerce. If state and local governments adopt different rules governing hazardous materials transportation, compliance and safety certainly are not enhanced.

The issuance of routing guidelines by the federal government for state and local use recognizes concurrent jurisdiction for certain activities related to hazardous materials. H.R. 4069 strikes the right balance between national uniformity and state and local regulations.

API appreciates the opportunity to provide these comment to the committee. Overall, we believe H.R. 4069 offers needed solutions to many of the problems that have affected the transportation of hazardous materials transportation. We urge Congress to reauthorize the Hazardous Materials Transportation Act this session.

Sincerely,

V. K. Leonard

V. K. Leonard

BEFORE THE
SUBCOMMITTEE ON SURFACE TRANSPORTATION
OF THE COMMITTEE ON PUBLIC WORKS
AND TRANSPORTATION OF THE
U.S. HOUSE OF REPRESENTATIVES

WRITTEN TESTIMONY
OF KEITH J. BUNTING
ON BEHALF OF
THE DOW CHEMICAL COMPANY

Keith J Bunting

Keith J. Bunting
Manager Distribution Government
& Public Affairs, Hazardous
Materials Transportation Regulations
Dow Chemical U.S.A.
2020 W. H. Dow Center
Midland, MI 48674

INTRODUCTION

The Dow Chemical Company is pleased to offer these comments for changes to the Hazardous Materials Transportation Act. Dow is a worldwide shipper of Hazardous Materials whose interest and experience qualify us to comment on this subject. The Hazardous Materials Transportation Act of 1974 has served well in promoting the safe transportation of Hazardous Materials. However, there are some subjects that need to be addressed as HMTA goes through the reauthorization process.

One of the prerequisites for the safe transportation of Hazardous Materials must be a uniform set of regulations that set standards for that transportation. A strong Federal preemption of state and local regulations that are inconsistent with the intent of the Hazardous Materials Transportation Act must be strengthened and maintained. The current inconsistency/preemption process is time consuming, tedious, and results only in advisory opinions which often end up in courts for ultimate resolution. Reauthorization legislation for the HMTA should contain language that clearly defines the separate roles of federal, state, and local regulations in the development of Hazardous Materials legislation/regulations. In addition, the preemption determination process should be improved to avoid lengthy court battles. In some instances, such as highway routing, there may be unique conditions whereby state and local governments should have the lead role. However, these activities should be guided by federal standards so they may be applied uniformly across the country.

Shipment-by-shipment prenotification of Hazardous Material shipments is unnecessary and unworkable. Besides delaying the normal flow of commerce, the receiving agencies would be inundated with copious amounts of data which they could not handle. Likewise, real time tracking of all Hazardous Materials shipments would produce much superfluous data at a tremendous cost to industry. One proposal that has been presented to this subcommittee would cost the U.S. portion of Dow about $3 million annually.

There has been much written and much more said that there is an apparent emergency response crisis in this country pertaining to the transportation of Hazardous Materials. Surveys and individual investigations have shown that this is only a perception. Many programs have been identified that are available from both public and private sources that can provide the necessary training for emergency response personnel. Title III of SARA 1986 has created the organizational structure at both the state and local level to assess needs and identify resources for emergency planning. Although the Title III programs are directed at fixed facilities, the same plans, resources, and emergency response personnel can be used in the event of a Hazardous Materials transportation incident. In addition, industry programs such as CMAs Community Awareness Emergency Response (CAER), TRANS CAER, which is an extension of CAER to the transportation environment, CHEMTREC, CHEMNET emergency response team network, and others all contribute significantly to help cover the U.S. with emergency response capability. Many individual manufacturers and transportation companies provide experts to assist not only in handling incidents but also to help provide training to others. If, after a careful needs assessment, there is still felt to be a need for funding additional emergency response capability, that funding should be specific in intent and broad-based in sourcing. Any funding proposal should recognize the transportation of Hazardous Materials is a positive contribution to the quality of almost everyone's daily lives.

Transportation employees whose performance impacts Hazardous Materials transportation need to be knowledgeable in the regulations and safety procedures necessary to transport Hazardous Materials safely. The current regulatory training requirements are very general and should be expanded to include some rudimentary topics and training requirements. However, any new training requirements should not be so specific to cause companies with good programs to completely redo them to meet a regulatory format.

In many areas there are sufficient regulations and legislation in place to provide for the safe transportation of Hazardous Materials. What is needed is more complete, more uniform enforcement of the regulations. Enforcement is an area where State governments can, and should, play a lead role, especially in the highway mode. All enforcement personnel, whether they are federal, state, or local, should be sufficiently trained in regulatory compliance to direct their efforts in those compliance areas that most directly affect the safe transportation of Hazardous Materials.

The final subject to be addressed in these comments is that of regulatory simplification. The intent of the Hazardous Materials Transportation Act of 1974 was to provide for the "safe" transportation in commerce of those materials that pose an unnecessary risk to the public or property. As more and more environmental concerns are addressed in Hazardous Materials regulations, the resultant effect is a complication and dilution of the basic safety regulations. Recognizing that environmental concerns are important, a distinction must be made that would preserve the primary thrust of the safety regulations.

Again Dow is pleased to have an opportunity to provide comments to this Subcommittee as it deliberates legislative improvements to HMTA.

ELECTRIC UTILITY COMPANIES'
NUCLEAR TRANSPORTATION GROUP

LEGAL COUNSEL:

LEBOEUF, LAMB, LEIBY & MACRAE
1333 NEW HAMPSHIRE AVENUE, N.W.
WASHINGTON, D.C. 20036

(202) 457-7531

June 21, 1988

Mr. Joseph A. Italiano
Editor
Committee on Public Works
 and Transportation
Rayburn House Office Building
Room 2165
Washington, D.C. 20515

Dear Mr. Italiano:

I enclose two copies of the statement prepared on behalf of the Electric Utility Companies' Nuclear Transportation Group, American Nuclear Energy Council, Edison Electric Institute and the Utility Nuclear Waste Management Group to be included in the record of the May 19 and May 25 hearings on hazardous materials transportation.

Sincerely,

Leonard M. Trosten
Program Manager and Counsel

Enclosures

cc: Ms. Pepper Riley

BY HAND

JUNE 21, 1988

STATEMENT OF

ELECTRIC UTILITY COMPANIES' NUCLEAR TRANSPORTATION GROUP
AMERICAN NUCLEAR ENERGY COUNCIL
EDISON ELECTRIC INSTITUTE
UTILITY NUCLEAR WASTE MANAGEMENT GROUP

SUBMITTED TO

SUBCOMMITTEE ON SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
UNITED STATES HOUSE OF REPRESENTATIVES

IN CONNECTION WITH MAY 19TH AND MAY 25TH, 1988
HEARINGS ON HAZARDOUS MATERIALS TRANSPORTATION

Introduction

This statement is submitted on behalf of the Electric Utility Companies' Nuclear Transportation Group (the "Nuclear Transportation Group"), the American Nuclear Energy Council ("ANEC"), the Edison Electric Institute ("EEI"), and the Utility Nuclear Waste Management Group ("UNWMG").

In order to operate nuclear power plants and to provide for the safe disposal of radioactive waste, it is crucial that nuclear utilities be able to transport radioactive materials to and transport radioactive waste from these plants in a safe and efficient manner. The Nuclear Transportation Group consists of 29 utilities responsible for 90 nuclear power plants in the United States. The Nuclear Transportation Group was formed in

1978 because of a growing concern among utilities about actions being taken by state and local governments that could hamper or preclude utilities' ability to transport nuclear fuel cycle materials safely and efficiently. One of the Nuclear Transportation Group's current priorities is to promote the successful implementation by the U.S. Department of Energy ("DOE") of the transportation-related provisions of the Nuclear Waste Policy Act of 1982, as amended by the Nuclear Waste Policy Amendments Act of 1987 ("NWPA").

ANEC, EEI, and UNWMG, are also vitally concerned with matters that could adversely affect the operation of this nation's commercial nuclear power plants. ANEC represents over 100 organizations that have an interest in nuclear energy, including investor-, public- and cooperatively-owned utilities, manufacturers, architect-engineers, and various firms involved in the nuclear fuel cycle. EEI is the national association of investor-owned electric companies. Its members serve approximately seventy-three percent of all ultimate consumers of electricity in the nation. UNWMG is an organization that is funded by 45 utilities with nuclear programs including EEI member companies, public utilities, and cooperatively-owned utilities. Its primary purpose is to promote the implementation of the federal statutes regarding radioactive waste management, specifically the NWPA, as amended.

This statement is being submitted for the Subcommittee's consideration during its review of the various bills before it that would amend or add to existing legislation governing the transportation in commerce of hazardous materials. Several of the bills under consideration by this Subcommittee are directed solely to shipments of radioactive materials, or more specifically high-level radioactive waste, including spent fuel. Given the specific interest of the organizations sponsoring this statement, it is addressed primarily to the need for legislation governing the transportation of radioactive materials.

Summary of Position

There is no demonstrated need for altering the current regulatory regime governing transport of spent fuel and high-level radioactive waste, which has been proven to provide a very high measure of safety. The bills pending before the Subcommittee that are designed to alter this regulatory regime (specifically, H.R. 3836, 1646, 2118, 3598 and 1649) would essentially replace the uniform regulatory program now in force with an extremely complex, burdensome and costly regulatory process that may actually decrease the overall safety of these shipments. Of course, the current regulatory framework is not perfect and some improvements could be made. Any changes in this regime should not single out radioactive materials for special treatment. In determining what improvements to the current regulation of hazardous materials shipments are necessary, the appropriate starting point is H.R. 4069, a proposal to amend the

Hazardous Materials Transportation Act developed by the Department of Transportation, the agency charged with responsibility for administering that statute. H.R. 4069 seeks to strengthen the Hazardous Materials Transportation Act by building on the experience gained by DOT in the administration of this law, without changing its basic structure.

The Existing Statutory and Regulatory Regime Governing Shipments of Spent Nuclear Fuel and High Level Radioactive Waste

Under the Hazardous Materials Transportation Act of 1974 ("HMTA"), the U.S. Department of Transportation ("DOT") is responsible for ensuring the safe transportation in commerce of the approximately 30,000 hazardous materials that are manufactured, transported and used in the United States, of which radioactive materials are a small subset. The use and transportation of radioactive materials also is regulated by the U.S. Nuclear Regulatory Commission ("NRC") under the Atomic Energy Act of 1954, as amended.

The relative responsibilities of the DOT and NRC with respect to safety regulation of the packaging and transport of radioactive materials are set forth in a Memorandum of Understanding signed by the two agencies in 1979. Pursuant to this MOU, the NRC is responsible for promulgating the design specifications and other regulatory requirements governing packages for shipments of spent fuel and high-level radioactive waste. NRC regulations require that such materials be transported in massive shipping casks the manufacture and use of which must be conducted in accordance with a certification issued by NRC. These casks weigh from 25 to 100 tons, and are designed to ensure that they can confine and shield their radioactive contents both during accident-free transportation and severe accident conditions. The NRC is also responsible for protecting shipments of radioactive materials from sabotage or terrorist acts, and NRC's regulations are designed to achieve this end.

No other hazardous materials are subjected to the same level and sophistication of regulatory control as are radioactive materials. This comprehensive regulation of radioactive materials transport, as well as the care with which utilities and other shippers treat these materials, has resulted in an exemplary safety record. The transportation of radioactive materials, including spent fuel, has been taking place, both nationally and internationally, for many years. The safety record for these shipments is not only exemplary; it is far better than that for virtually all other hazardous materials. In this regard, the report on hazardous materials transportation prepared by the Office of Technology Assessment ("OTA") states that "OTA finds the technical evidence in cask performance and service indicates that NRC performance standards yield spent fuel shipping cask design specifications that provide for a very high level of public protection - much greater than that afforded in any other current hazardous material shipping activity."

As can be seen in Table I, between 1964 and 1986, 4,887 commercial spent fuel assemblies have been shipped off-site[1] using both the highway and rail modes of transport. On average, there have been approximately 85 shipments of commercial spent fuel per year. There have even been more spent fuel shipments on behalf of the federal government. Table II lists the type of shipments that have been made to and from commercial nuclear power plant sites. Hundreds of individual spent fuel shipments involving thousands of fuel assemblies have been made in this country both by private industry and the government and many, many more shipments of spent fuel have been made in Europe. We are not dealing with an infant industry. Moreover, the transportation of spent fuel has taken place in an extremely safe manner. As can be seen in Table III, in over 20 years of spent fuel shipping experience in the United States, there have been only six accidents, not one of which caused any damage to the cask or release of radioactivity.

Despite this excellent safety record, the public is very concerned about the potential risks of radioactive materials transportation. A measure of this concern is the fact, reported by OTA, that gasoline transport is responsible for more injuries and dollar damages than all other hazardous materials combined, yet state and local transport restrictions are frequently aimed at shipments of radioactive materials and hazardous wastes, which together account for less than 3 percent of all hazardous materials shipments. In fact, most transport restrictions are aimed at shipments of spent fuel and high-level radioactive waste, which comprise less than 1 percent of all hazardous materials shipments. These state and local restrictions on radioactive materials shipments are not contributing to their safety, but may be inhibiting safety because they create regulatory inconsistency, uncertainty and chaos. What we have here is the very "multiplicity of state and local regulations and the potential for varying as well as conflicting regulations" that Congress intended to preclude by enactment of the HMTA.

---

[1] These include shipments from on-site reactor storage pools to and from other utility-owned nuclear plant spent fuel pools, private storage facilities, reprocessing facilities and research facilities.

We do not believe that the oft-cited concerns about the consequences of a catastrophic accident involving a spent fuel cask are justified. While it is possible to hypothesize a transportation accident that could have significant consequences to the health and safety of the general public, both the shipment experience to date and the design of the NRC-certified casks used to transport spent fuel provide assurance that the risk, measured in terms of the probability times the consequences of such an event, is extremely small. The OTA Report stated, "OTA concludes that the probability of an accident severe enough to cause extensive damage to public health and the environment caused by radiological release from a properly constructed cask is extremely remote." A Sandia National Laboratories study recently concluded, based on a simulated sabotage attack on a spent fuel cask in the densely-populated urban area, that only .0006 percent of the cask's contents would be released and the expected public health consequences would be no early fatalities and 0.2 latent cancer fatalities[2] over the next thirty years, or 1 cancer fatality in a 150 year period. It is estimated that approximately 250,000 other cancer fatalities would develop in that population from other causes over the same time period.

Last May, the Lawrence Livermore National Laboratory completed a study conducted for the NRC, commonly referred to as the Modal Study. The purpose of the Modal Study was to determine whether the NRC's existing regulatory requirements governing cask strength and integrity provide adequate protection against the forces created in severe transportation accidents that have actually occurred. The study evaluated how a cask designed to NRC standards would respond in some of the worst accidents involving hazardous cargo in U.S. history, such as the Caldecott Tunnel Fire in California in April of 1982. (It should be noted that accidents involving hazardous materials other than radioactive materials had to be studied because no similar accidents involving high-level radioactive materials had ever occurred).

The study concluded that 99.4 percent of the truck and train accidents, if they involved a spent fuel cask, would result in only superficial damage to the cask and "negligible" radiological hazards that are well within acceptable limits under existing NRC regulations. Taking into account the 0.6 percent of the accidents which could result in some radiological risk, the expected radiological consequences from the shipment of 3,000 metric tons of spent fuel per year -- the amount likely to be transported annually from nuclear power plants across the country to a geologic high-level waste repository -- is 1 latent cancer fatality every 7,500 years.

---

[2] A latent cancer fatality is a cancer induced by the radiation exposure that appears from 1 to 30 years after the exposure.

The above statistics on the safety of spent fuel shipments demonstrate that the regulatory regime governing these shipments has been and is continually evaluated and analyzed to ensure that it is designed to provide for adequate public protection from the risks inherent in the transportation of spent fuel. Furthermore, the excellent safety record of these shipments to date is not mere luck, but rather it is because they are so comprehensively regulated by the NRC and DOT under existing statutory authority.

The Need to Modify the Current Regulatory Regime

There are several bills pending before this Subcommittee that would alter the regulatory regime governing radioactive materials transport, including H.R. 3836, introduced by Congressman Owens of Utah; H.R. 1646, introduced by Congressman Green; H.R. 2118, introduced by Congressman Buechner; H.R. 3598, introduced by Congresswoman Meyers; and H.R. 1649, introduced by Congressman Gunderson. Before addressing these bills, this statement will briefly describe the fundamental principles that the nuclear industry believes should guide the regulation of radioactive materials transport:

- The public at large is best protected by the establishment of a national, uniform comprehensive regulatory system. That system essentially exists today for radioactive materials and has proven its value and workability. State and local concerns can be appropriately accommodated within that framework, but it is critical to our ability to transport these materials safely, prudently and economically that a national, uniform, comprehensive regulatory system be maintained.
- This Federal system, with its standards for the packaging and transportation of these materials, must preempt inconsistent state or local regulations to prevent the chaos that would result if each state, locality or tribal government is permitted to enact and enforce its own regulations without any concern for the possible effects on other jurisdictions.
- Shippers, whether utilities, the federal government or others, must be able to use any or all available modes of transportation in order to be able to choose the most advantageous one, from the standpoint of safety, efficiency and cost, as individual circumstances may dictate.
- No regulatory requirement should be established, modified or eliminated without a sound technical justification.

With these principles in mind, the nuclear industry is generally opposed to the bills pending before the Subcommittee that seek to alter the regulatory regime governing radioactive materials transport for three primary reasons. First, there is no demonstrated need for altering the current regulatory regime governing the transport of spent fuel and high-level radioactive waste. Nor are there any technical justifications for treating radioactive materials differently from other hazardous materials. Second, the DOT and NRC have the requisite authority to promulgate regulatory requirements of the type proposed in these bills if, in the exercise of their technical expertise, they determine that such requirements are necessary to do so to assure the safe transportation of radioactive materials. Third, these bills essentially would replace a uniform regulatory program that has proven to provide a high measure of safety with an extremely complex, burdensome and costly regulatory process that may actually decrease the overall safety of these shipments.

As mentioned above, the DOT and NRC have the requisite authority under current law to promulgate regulations governing the topics covered in the bills, e.g., individual shipment licenses, physical testing of cask designs, modal choice, routing, prenotification to states and tribes of shipments through their jurisdictions, and preparation of environmental assessments prior to shipments. In many of these areas the NRC and DOT already have promulgated those regulatory requirements they deem necessary, in the exercise of their expert judgement, to ensure public safety (e.g., prenotification, advance route approval, package testing standards, highway routing rules, accident and incident reporting). The DOT and NRC also have considered the need for additional regulatory requirements to promote safety, including many of those proposed in these bills, and have determined that they either were not necessary or not desirable.

To take but one example, many of the bills evidence a concern about the routing of spent fuel through densely populated areas. H.R. 1646 would require the Secretary, in determining the route of travel for a shipment of a highway route controlled quantity of radioactive materials (which basically includes high-level radioactive waste and spent fuel) into or through a high-density metropolitan area, to prepare an environmental impact statement that includes a consideration of alternative modes of transportation. H.R. 2118 would prohibit the transportation of high-level radioactive waste or low-level radioactive waste by rail through any high-density metropolitan area unless the Secretary finds that no reasonable alternate route is available. Finally, H.R. 3836 would prohibit the transportation of spent fuel or high-level radioactive waste through an urban area if the affected local government can identify a significantly safer route.

The nuclear industry is opposed to all of these bills. The restrictions on highway transport through densely-populated areas basically would render null the highway rulemaking proceeding for radioactive materials conducted by the DOT in Docket No. HM-164. In that proceeding, based on several risk assessment studies, extensive public comments, and past accident experience, DOT concluded that "the public risks in transporting [radioactive] materials by highway are too low to justify the unilateral imposition by local governments of bans and other severe restrictions on the highway mode of transportation. Other modes of transport generally do not appear to offer alternatives which clearly lower public risks to the extent that use of the highway mode should be substantially restricted." 46 Fed. Reg. 5298, 5299.

DOT also concluded that these low risks could be reduced even further by the promulgation of highway routing regulations. DOT thus promulgated a federal framework for the highway routing of radioactive materials. Under this framework, general routing requirements are applicable to shipments of certain low-level radioactive materials and specific routing requirements are applicable to shipments of high-level radioactive materials. More specifically, low-level radioactive materials requiring placarding must be transported on routes selected to minimize radiological risk, considering available information on accident rates, transit time, population density and activities, time-of-day and day-of-week during which transportation will occur. Spent fuel and high-level radioactive waste must be transported on the interstate system highways, and on a beltway or bypass around cities when available, with such routes selected to reduce time in transit. As will be discussed further below, DOT also provided in the rule a procedure by which states may designate alternative routes to the federally-prescribed preferred routes for high-level radioactive materials shipments, including spent fuel, within their jurisdictions. DOT's highway routing rule was upheld on judicial review and found to comply fully with the requirements of the HMTA and the National Environmental Policy Act. City of New York v. Department of Transportation 715 F.2d

732 (2d Cir. 1983), appeal dismissed and cert. denied, 465 U.S. 1055 (1984).

The routing approach taken in the bills discussed above is contrary to that followed by DOT in HM-164 because it elevates population density to the primary factor in routing decisions, and decreases the emphasis on the factors DOT found to be most related to safety (e.g., quality of the road and time in transit). Thus, they could actually result in a decrease in overall safety. For this reason, the nuclear industry strongly opposes the enactment of legislation prohibiting or restricting the highway transport of radioactive materials through urban areas. Moreover, if the driving force behind the routing provisions of the proposed bills is a concern on the part of state and local authorities about the safety of shipments through urban areas, HM-164 includes a mechanism pursuant to which nonfederal governmental entities can designate alternative routes to those through urban areas in their jurisdictions if the appropriate procedures are followed, including an analysis of the risk posed by the deviation from the federally-mandated route.

The nuclear industry is also opposed to H.R. 2118, which seeks to prohibit rail shipments of radioactive wastes through densely-populated areas. Although DOT has the authority under the HMTA to promulgate a comprehensive routing rule for rail shipments of radioactive materials, it has not done so and for good reason. As DOT explained in the section-by-section analysis of its proposed amendments to the HMTA (H.R. 4069):

> the routing of railroad shipments of hazardous materials has been the subject of a number of studies. Based on those studies we have concluded that, absent vast and impractical restructuring of the nation's rail system, efforts to make nationwide changes in rail routing (e.g., routing hazardous materials away from heavily populated areas) would not improve safety.

We strongly agree with DOT on this point. In our opinion, a rail routing rule is not necessary to provide for an adequate level of public safety, and actually could be counterproductive.

Rail routing decisions are currently made jointly by the shipper and carrier, taking into account all the factors that DOT found relevant to routing decisions in HM-164. These factors, in the rail context, include time in transit, quality of the tracks, required number of interchanges, and desirability of avoiding populated areas when possible. However, it must be kept in mind that there are far fewer routing options for rail shipments than there are for highway shipments, especially when one attempts to use the better quality tracks. The best tracks typically traverse densely-populated areas because the railroads essentially were developed for the purpose of connecting the nations' cities. Thus, when all these factors are taken into account, the preferable rail route from a public safety standpoint in most cases will require travel through densely-populated areas. Given the extreme safety of shipments of high-level radioactive materials, including spent fuel, the radiological risk to the public from these shipments is extremely small, regardless of where they occur. Routing shipments around urban areas could actually increase the overall risk of these shipments because requiring circuitous routing on secondary tracks could significantly increase the nonradiological risk (e.g., the risk of a traffic accident).

Advantages of Using DOT Bill as a Starting Point for Legislation

As is made clear in the previous portion of this statement, the nuclear industry believes that the current statutory and regulatory regime governing shipments of radioactive materials provides for a very high level of public safety, and that there is no compelling need for amendments to the current regime. We would be the first to admit, however, that the current regulatory regime is not perfect, and that improvements could always be made. However, we also believe that any changes in the current regulatory regime should apply generically to all hazardous materials, and should not single out radioactive materials for special treatment. There is simply no basis, considering the safety record of radioactive materials shipments, the potential hazard of such shipments, and the existing degree of federal regulation of such shipments, for enacting legislation that is directed solely at radioactive materials shipments to the exclusion of other hazardous materials.

In determining what improvements to the current regulation of hazardous materials shipments are necessary, we believe that the appropriate starting point is H.R. 4069, the bill to amend the HMTA introduced by Congressman Howard. This bill consists of a proposal to amend the HMTA developed by the DOT, the agency charged with administering that statute.

There are two equally important reasons why we strongly encourage the Subcommittee to use H.R. 4069 as a starting point in developing any legislation governing hazardous materials transport. First, because of DOT's statutory responsibilities and its experience in administering the HMTA, DOT is most aware of the areas of the statute that need to be strengthened or clarified and any gaps in its authority that need to be filled. Second, DOT has a broader perspective than any one state, locality, or interest group, and can most objectively consider and balance the interests of the public, shippers, and carriers.

Turning to the specific provisions of H.R. 4069, the nuclear industry supports the intent of the bill, although we believe that the specific provisions could use some fine tuning. In particular, although the HMTA, and the regulations promulgated thereunder, have proven to provide for a very high degree of transportation safety, experience has also proven that the HMTA could be strengthened to provide for a clearer delineation of federal, state, and local governmental responsibilities. Clarification of the appropriate regulatory roles of federal and nonfederal governments would preclude more conflict over the scope of the preemptive effect of the HMTA. H.R. 4069 would provide a significant step forward in achieving that goal, and that is the primary basis for our support of the bill.

H.R. 4069 would clarify the preemptive effect of the HMTA and the regulations promulgated thereunder in two primary ways. Section 2 of the bill would first broaden the HMTA's grant of authority to DOT to promulgate transportation rules, by listing several substantive areas where rules promulgated by the DOT would preempt any rule issued by a state or political subdivision addressing the same subject, unless the nonfederal requirement is "otherwise authorized by law." These subjects include the classification of hazardous materials, shipping papers, incident reporting, highway routing, and packaging. Through its inconsistency ruling process (§ 112 (a) of the HMTA), DOT has already concluded that virtually all of these subjects are of the type that must be regulated in a uniform and consistent manner by the DOT to ensure an adequate level of public safety. Thus, the provision would in large measure codify existing DOT policy. An express Congressional endorsement of DOT's inconsistency rulings, which are only advisory opinions and do not have the force of law, would put an end to any further controversy over the validity of those rulings. In addition, such an endorsement would make clear to nonfederal entities that it is not appropriate to seek to regulate the subjects deemed to be of an exclusively federal nature other than through adoption and enforcement of the federal requirements. We therefore support the intent of this provision, although not the specific language. In particular, we do not understand the need for, or intent of, the inclusion of the phrase "otherwise authorized by law". This is one of the areas that we believe is in need of some fine tuning as was previously mentioned.

The second way in which H.R. 4069 would clarify the preemptive nature of the HMTA and the regulations issued thereunder is by reorganizing and strengthening the express preemption provision of the HMTA. One of Congress' principal purposes in enacting the HMTA in 1974 was "to preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous materials transportation." S. Rep. No. 1192, 93d Cong., 2d Sess. 37-38 (1974). Congress thus included an express preemption provision in the HMTA (þ 112) pursuant to which state or local transport regulations that are inconsistent with the HMTA or the regulations issued thereunder are automatically preempted. As noted above, pursuant to §112(a) of the HMTA, DOT issues "inconsistency rulings" with respect to nonfederal transportation requirements. Congress further provided in §112 (b) of the HMTA that DOT may waive the preemptive effect of its regulations on a particular inconsistent State or local requirement where "exceptional circumstances" or "emergency situations" are present, and the DOT finds that enforcement of the nonfederal requirement would provide for at least an equivalent level of safety as the federal requirement and would not impose an unreasonable burden on interstate commerce. Following enactment of the HMTA, the DOT promulgated regulations governing its issuance of what has become known as inconsistency rulings and nonpreemption rulings.

DOT routinely issues inconsistency rulings but it does not have exclusive or primary jurisdiction to do so and an inconsistency ruling can also be issued by a court of competent jurisdiction. On the other hand, DOT has exclusive authority by statute to issue nonpreemption rulings. Although DOT's nonpreemption rulings have the force and effect of law, its inconsistency rulings, which are in the nature of advisory opinions, do not. Thus, if DOT finds that a State transportation requirement is inconsistent, the State may nevertheless decide to continue enforcing the requirement, putting affected shippers and carriers in the position of having either to comply with an inconsistent requirement or to challenge the legality of the requirement in a court.

H.R. 4069 seeks to rectify this situation in several ways. First, it codifies the DOT's regulations setting forth the standards for a determination of inconsistency, and expressly provides that any person affected by a nonfederal requirement may apply to DOT for a determination of whether that requirement is preempted under those standards. The bill thereby removes any doubt that may remain about the DOT's authority to issue inconsistency rulings, which under the new regulatory system would be referred to as preemption rulings. The bill also expressly reaffirms the right of any party to seek a similar ruling in a court of competent jurisdiction, although it prohibits an applicant before DOT from filing an identical application with a court for 180 days after filing the application with DOT. In addition, the bill provides for judicial review of preemption rulings in the U.S. District courts, thereby implying that such rulings are final enforceable agency actions.

Although we strongly support the bill's strengthening of the preemption ruling process, we believe that some additional modifications would be appropriate. For example, given the fact that DOT's preemption determination is largely a factual determination, judicial review may be more appropriate in a U.S. Court of Appeals than a District Court, because the latter would essentially be repeating the factual inquiry already made by DOT. In addition, it may be a more efficient use of the administrative process to vest DOT with primary jurisdiction to issue preemption rulings and require an exhaustion of administrative remedies prior to involving the courts in the process.

One final point we would like to make with regard to H.R. 4069 concerns the section which authorizes the Secretary to issue standards for the designation of routes over which hazardous materials shipments may be transported in commerce by motor carriers. As noted above, DOT has already promulgated a comprehensive highway routing rule (HM-164) governing radioactive materials shipments, which provides a significant role for states and localities in highway routing decisions. In fact, the bill appears to track in large measure the provisions of HM-164. Given the fact that DOT clearly had the authority under existing law to promulgate HM-164, DOT does not need a new grant of authority to enact a similar highway routing rule for nonradioactive hazardous materials, and in fact DOT has issued an advance notice of proposed rulemaking soliciting comments on whether it should do so. Nevertheless, there may be a significant benefit, in terms of eliminating controversy and contributing to transport safety, in specifying in the statute the appropriate relationship between federal and state/local authorities with respect to highway routing and we believe that H.R. 4069 basically strikes the appropriate balance. If this provision is enacted, we strongly urge the Subcommittee to make clear that it does not intend in any way to suggest that HM-164 is no longer of full force and effect, or needs to be modified in light of the statutory modification.

The one provision of the highway routing provisions of the bill that is not present in HM-164 is the grant of authority to DOT to resolve routing disputes among the states. Experience with HM-164 has shown that there is a need for DOT to assume this role, and although DOT may have the authority to resolve routing disputes among states under existing law, including this provision in the statute and making DOT's decision subject to judicial review is clearly in the public interest.

Conclusion

In the almost 15 years since its enactment the HMTA, as administered by the DOT, has provided for a high degree of public safety in the transport of the thousands of shipments of hazardous materials made annually in this country. For this reason, we strongly support the reauthorization of the HMTA. We also recognize that there are areas where DOT's hand could be strengthened in order to provide for an even greater measure of public safety. In our opinion, to the extent legislation is deemed necessary, H.R. 4069 is the appropriate starting point in that endeavor. H.R. 4069 seeks to strengthen the HMTA by building on the experience gained by DOT in the administration of the HMTA without changing its basic structure.

TABLE I

OFF SITE
COMMERCIAL
SPENT FUEL
SHIPMENTS

1964 - 1986

YEAR	TOTAL ASSEMBLIES	# ASSYS. BY TRUCK	RAIL	EST # SHIPM'TS TRUCK	RAIL	EST TOTAL # SHIPMENTS
1964	9	1	8	1	1	2
1965	231	-	231	-	19	19
1966	421	124	297	124	23	147
1967	174	-	174	-	15	15
1968	137	-	137	-	11	11
1969	287	80	207	80	14	94
1970	289	41	248	41	25	66
1971	178	16	162	16	15	31
1972	102	102	-	102	-	102
1973	274	202	72	121	9	130
1974	346	333	13	222	2	224
1975	262	198	64	146	4	150
1976	470	146	324	146	21	167
1977	530	123	407	122	29	151
1978	158	46	112	46	16	62
1979	130	25	105	23	15	40
1980	54	22	32	22	5	27
1981	25	12	13	12	2	14
1982	14	14	-	14	-	14
1983	94	94	-	94	-	94
1984	396	342	54	181	3	184
1985	283	283	-	92	-	92
1986	23	23	-	8	-	8
TOTALS	4,887	2,227	2,660	1,615	229	1,844

TABLE II

NATURE
OF
SPENT FUEL
SHIPMENTS

1964-1986

DESTINATION	NO. OF ELEMENTS
TRANSFERRED TO/FROM OFF-SITE POOLS	339
SHIPPED TO/FROM AFR STORAGE	1,491
SHIPPED TO/FROM REPROCESSOR	3,001
SHIPPED TO/FROM RESEARCH FACILITY	56
TOTAL	4,887

TABLE III

TRANSPORTATION ACCIDENTS
INVOLVING
COMMERCIAL SPENT FUEL

DATE	LOCATION	DESCRIPTION	RESULTS
12/08/71	near Oak Ridge Tennessee	Truck driver left road during rain storm to avoid head on with car. Truck rolled - cask thrown free landing in mud in ditch. Driver killed.	Cask not damaged. No release of contents.
3/29/74	N. Carolina	RR tank car derailed and struck cask on another track.	Superficial damage. No release of contents.
2/09/78	Illinois	As cask crossed RR tracks the extra stress caused trailer to collapse due to broken weld.	Cask not damaged. No release of contents.
8/13/78	New Jersey	As empty cask being placed onto trailer the trailer deck failed due to broken weld	Cask not damaged. No release of contents.
12/09/83	border between Indiana and Illinois	As truck started moving while in construction zone, free standing trailer separated from tractor. Brakes locked and trailer stopped within 3 feet.	Cask not damaged. No release of contents.
3/24/87	St. Louis, MO	Train struck automobile at railroad crossing	No damage to train or casks

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

WASHINGTON, D.C.

HEARINGS ON
REAUTHORIZATION OF HAZARDOUS
MATERIALS TRANSPORTATION ACT

STATEMENT OF THE NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION

MARTIN E. FOLEY
EXECUTIVE DIRECTOR
2200 MILL ROAD
ALEXANDRIA, VIRGINIA 22314

DATED: June 17, 1988

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

WASHINGTON, D.C.

HEARINGS ON
REAUTHORIZATION OF HAZARDOUS
MATERIALS TRANSPORTATION ACT

I. INTRODUCTION

My name is Martin E. Foley. I appreciate having this opportunity to present the views of the National Motor Freight Traffic Association, Inc., to this committee. I am NMFTA's Executive Director. My business address is 2200 Mill Road, Alexandria, VA 22314, and my telephone number is (703) 838-1818.

I have served as NMFTA's Executive Director since December 1, 1985. Prior to that time, I was employed by the Interstate Commerce Commission for nearly 31 1/2 years. During the last 2 1/2 years of my service at the ICC, I was Managing Director of the agency and for the previous 12 years I had been Director of its Bureau of Traffic. In the various capacities in which I served at NMFTA and at the ICC, I have become conversant with the transportation operations of virtually all segments of the regulated trucking industry.

NMFTA is a nonprofit membership corporation organized under the laws of the District of Columbia, with offices at 2200 Mill Road, Alexandria, VA 22314. Its members comprise over 1,700 trucking companies of all sizes which are operating in interstate, foreign and intrastate commerce under regulation by the Interstate Commerce Commission and the various state regulatory agencies. In connection with their general operations as motor common carriers of general commodities many of our members are called upon to haul shipments consisting of or including hazardous materials. NMFTA is charged with the responsibility of representing its members in connection with matters such as these hearings which directly involve their interests.

II. STATEMENT

NMFTA is greatly concerned that the difficulties and dangers associated with the transportation of hazardous materials throughout the United States are increasing rapidly due to the growing proliferation of rules, regulations and standards by states and local communities. It has become much more difficult for a carrier to be knowledgeable of, and in compliance with, the present confusing array of conflicting rules and standards which exist in communities nationwide.

NMFTA supports the proposed legislation under consideration by this Committee to the extent that it preempts local rules regarding hazardous materials transportation and substitutes national standards and rules. Such legislation would not only promote commerce but it would enhance public safety as well.

It is important for this Committee to recognize the very parochial nature of the present array of local rules and regulations applicable on the transportation of hazardous materials. While many of these rules are intended to enhance the safety of the involved jurisdiction, they may instead have the effect of jeopardizing public safety overall as well as unnecessarily hampering transportation efficiency. I would emphasize that this legislation involves the transportation of not only obviously dangerous commodities such as radioactive materials, explosives and poison gases, but literally thousands of familiar consumer commodities which present a much lower level of hazard.

Local regulations promulgated by metropolitan jurisdictions are apt to be designed for the protection of only the citizens within those jurisdictions. These local rules may result in the routing of hazardous materials shipments so as to completely bypass the involved metropolitan areas. While such rules would at first appear to be in accord with common sense, they fail to give full consideration to the overall public safety. For example, they do not take into account the fact that the hazardous materials are being routed away from metropolitan area command posts which have the necessary equipment and trained personnel to quickly and efficiently dispose of an accidental release. Such a release could otherwise be mishandled by the untrained personnel who are more likely to be encountered along the prescribed route away from the metropolitan area. In addition, the circuitous routing may require the hazardous materials shipments to travel much greater distances along relatively poor quality roads. Under these conditions, the chances for an accidental release are greatly magnified. Thus, the result of these local regulations could be to greatly increase the chances of a hazardous materials release in an area where it could not be properly and safely handled. For these reasons, it is the most practical and direct route which is often the one most consistent with the overall public safety - including the safety of citizens living outside of metropolitan jurisdictions.

Also, regulations promulgated by numerous local jurisdictions require a motor carrier with any hazardous materials on board to wait for an escort before proceeding through tunnels or across bridges. The purpose of these regulations is, of course, to insure that if an accidental release occurs at such critical locations, personnel with some knowledge of hazardous materials will be on hand at the scene and immediately available to safely handle the problem. In this way, these regulations seek to avoid the traffic congestion and danger which would result from a hazardous materials release at a critical bottleneck.

In practice, however, the trucks containing hazardous materials may be required to park near entrances to tunnels and bridges for long periods of time waiting for escorts. This increases the chances for a release at a place where it could be almost as dangerous as if it had occurred in the tunnel or bridge itself. Therefore, such regulations, while well intentioned, are often counterproductive in practice.

Another problem engendered by the lack of uniformity of local laws and regulations applicable on hazardous materials concerns the reporting of accidents. Carrier personnel cannot possibly be familiar with the bewildering array of reporting requirements which differ with each community they travel through. The driver, when experiencing an accident, may call a likely local office in the town in which the spill occurred. Often he is then subjected to a chain of telephone referrals which consumes the valuable time following the accident which is critical to conducting a safe and efficient cleanup operation. Even when the person designated to handle the hazardous materials releases is finally reached, if he is an official in a small town, hazardous material handling may be only a very minor part of his overall responsibilities. Due to lack of experience with the particular substance, this local official may be unable to take the prompt action which is needed.

Having the transportation governed, at least in part, by local rules can pose an additional threat to the public safety. The rules of many localities may permit the operation of trucking companies which are not capable of meeting the national safety standards and regulations imposed on interstate carriers. These standards have been formulated by DOT after exhaustive research to meet the needs of public safety and should govern interstate as well as intrastate traffic. Conversely, localities with myopic points of view have enacted hazardous materials regulations with unnecessarily stringent standards and requirements. These "overkill" regulations can have the effect of severely restricting the nationwide flow of these commodities.

Local rules can severely burden commerce in other ways as well. Rules which would affect the packaging, container design, marking, placarding or labeling of hazardous materials are particularly objectionable. Inasmuch as these products are shipped nationwide, the proliferation of such rules would pose an impossible burden on their movement. The system presently in place provides identification of hazardous materials on bills of lading and requires the marking and labeling of packages and containers. This system is adequate to allow the first respondents to a hazardous materials accident to identify the problem and take the necessary action.

Several of the bills which are being considered by this Committee contemplate the assessment of fees to help defray the costs to the public in connection with the regulation of hazardous materials transportation and the emergency response to accidents involving these products. NMFTA would point out that these products are used to serve the needs of the public, and that the burden of these expenses should not fall disproportionately on the carrier. At the very least, the expenses ancillary to the transportation of hazardous materials should also be shared by the producers, shippers and receivers of these materials, as well as the companies who manufacture the containers in which these materials are shipped.

A growing number of jurisdictions throughout the United States are imposing fees on the transportation of hazardous materials within their borders. These fees are apt to be inconsistent with national hazardous materials standards and therefore are void. However, more often than not, they go unchallenged. Litigation to contest such fees is so time consuming and expensive as to be practically prohibitive.

NMFTA would agree with the bills which propose some form of federal registration for carriers who haul hazardous materials. However, these regulations should not apply to carriers of only consumer commodity - ORM-D items. The risk to public safety posed by these commodities is not appreciably greater than that posed by any other freight. Further, the movements of these consumer products are so numerous as to constitute a substantial portion of all general commodities movements.

For these reasons, it is the NMFTA's position that public safety would be enhanced by the preemption of the myriad local rules and regulations which presently govern the transportation of hazardous materials. In place of these local rules, nationwide uniform rules should be enacted which reflect thorough consideration of all pertinent factors. It is imperative that any regulations governing the transportation of hazardous materials by motor carrier should reflect the views of the trucking companies who actually handle these materials. Therefore, NMFTA recommends that representatives of the trucking industry be permitted an adequate opportunity to voice their concerns when such rules are being formulated.

In regard to the specific bills which are being proposed to amend the Hazardous Materials Transportation Act, NMFTA would offer the following comments:

H.R. 4069 - With the few exceptions which will be noted, the NMFTA supports this proposed legislation inasmuch as it promotes a policy of uniform nationwide rules and practices. The involved rules cover the designation of hazardous materials, the establishment of standards for shipping documentation, the specification of rules for the notification and reporting of hazardous materials releases, and the establishment of standards for highway routing and for hazardous materials packaging.

In particular, the NMFTA supports Section 2 of the proposed legislation which would provide that, with respect to highway route designations for hazardous materials transportation, "actions taken by States or political subdivisions thereof under this subsection may not unreasonably burden commerce." This requirement is needed to provide some relief against particularly onerous and parochial local route restrictions. We would emphasize, however, that to the extent that challenges on a case-by-case basis are contemplated, this could be very expensive and time consuming.

The NMFTA also supports Section 10, which preempts state or local requirements regarding hazardous materials which either conflict with federal requirements or regulate a subject preempted under Section 105(a)(4) of Title 49 U.S.C.

The NMFTA objects to that portion of Section 7 of H.R. 4069 (CIVIL PENALTIES) which would amend 49 U.S.C. App. 1809(a) "by striking out 'knowingly' each place it appears." Motor carriers are very often totally dependent upon their shippers to inform them with regard to any hazardous content of the shipments they are being tendered. Carrier personnel are obviously not in a position to perform a chemical analysis on each shipment to determine whether the description appearing on the bill of lading is accurate. It is, therefore, inconsistent with our basic legal and equitable concepts and standards to subject carriers to civil penalties for offenses they may be powerless to avoid.

H.R. 4153 - Would require the Secretary of Transportation to conduct a region by region analysis of hazardous materials incidents in cooperation with carriers and shippers and their associations. This would appear to be a worthwhile project inasmuch as the information to be derived is necessary to provide the basis of state regulations.

H.R. 3334 - This legislation proposes a "Central Data Reporting and Retrieval System" which would be "capable of receiving, storing and retrieving data concerning shipments of hazardous materials or hazardous waste." The system would be developed by a private entity and maintained at no cost to the United States. The data in the system would be entered through submission of hazardous materials manifests by every generator of hazardous materials. A fee of $12.00 per manifest would be charged.

NMFTA feels that an automated system of this magnitude is probably not only impractical but infeasible from a data processing point of view. Further, the submission of a $12.00

fee for every hazardous materials manifest would be excessive in view of the millions of shipments containing hazardous materials which move daily.

H.R. 895 - Provides for the registration of hazardous materials carriers and shippers. It proposes that, before hazardous materials shipments can be transported through a city or municipality of at least 50,000, the jurisdiction must be notified and must provide a route for such transportation. It further contemplates the imposition of a $0.025 per ton tax on shipments of hazardous materials - the tax to be paid by the carrier.

These provisions are ill advised. They would greatly and unnecessarily impede the necessary transportation of the countless commodities which are designated as hazardous materials regardless of how minor the threat they might pose. These requirements would provide cities and towns a political incentive to enact restrictions which would effectively block the passage of such shipments. This would be contrary to the public interest for the reasons previously stated. When all pertinent factors are evaluated, the safest and most practical route is often through the involved jurisdiction. In addition, the proposed tax on the movement of these products would unduly burden interstate commerce. The overall effect of this legislation would be the antithesis of sound regulation.

H.R. 3677 - Under this bill DOT would develop a formula to assist in the evaluation of hazardous materials routes. This proposal is desirable to the extent that it would promote uniformity in hazardous materials route selection.

H.R. 2650 - This legislation would provide grants to state and local governments for the establishment of routes for the transportation of hazardous materials within and between the states, and for the designation of parking sites for trucks carrying hazardous materials. Even though DOT would establish guidelines bearing on the route selection, this legislation would encourage the sort of provincial determinations which presently burden the transportation of hazardous materials while decreasing, rather than increasing, public safety.

Additional federal aid to state and local governments would be provided under this bill, including: technical and financial assistance in support of the training and equipping of emergency response personnel, and a DOT study of the flow of hazardous materials throughout the United States. The proposed study would facilitate state enforcement of hazardous materials laws and regulations. NMFTA supports these provisions as they would provide needed assistance to states and localities in developing response capabilities.

In addition, however, this bill would amend Section 110(a) of the Hazardous Materials Transportation Act by striking out "knowingly" each place it appears. Further, it would impose a fine of "not less than $500.00" for individual violations of the provisions. For the reasons previously expressed in regard to H.R. 4069, the imposition of penalties on a trucking company for unknowing and unavoidable violations of the law, is contrary to our concepts of law and equity. Further, the amount of the fine is excessive in view of the numerous and very minor violations which could occur.

H.R. 3836, 1649, 1646, 3598, 3077 and 2650 deal with the transportation of nuclear and radioactive materials. NMFTA's members are not primary transporters of these materials. Therefore, lacking specific expertise in this area, we will not address these bills at this time.

WHEREFORE, THE PREMISES CONSIDERED, the National Motor Freight Traffic Association would urge action on the bills proposing to amend the Hazardous Materials Transportation Act in accord with the comments expressed herein. In particular, we would urge prompt action on H.R. 4069. We believe that this legislation is in accord with the public interest. It would facilitate the safe and efficient transportation of hazardous materials throughout the United States while reducing the burden and danger which result from the proliferation of diverse and conflicting state and local regulations applicable on the transportation of these products.

Respectfully submitted,

Martin E. Foley

Martin E. Foley
Executive Director
National Motor Freight Traffic
Association
2200 Mill Road
Alexandria, VA 22314
(703) 838-1818

DATED: June 17, 1988

National
Paint &
Coatings
Association

June 3, 1988

BY HAND

The Honorable Glenn M. Anderson, Chairman
Subcommittee on Surface Transportation
U.S. House of Representatives
2329 Rayburn House Office Building
Washington, D. C. 20515-0532

Dear Sir:

Attached please find the Statement for the Record of the National Paint and Coatings Association, Inc., regarding the reauthorization of the Hazardous Materials Transportation Act. I have enclosed sufficient quantities to allow for distribution to the Subcommittee's professional staff, as well as for inclusion in the record.

Should your staff require additional copies of NPCA's Statement, or if any follow-up questions arise, please do not hesitate to contact me.

Thank you for the opportunity to submit a statement.

Sincerely,

Peter M. Berkery, Jr.
Counsel

PMB:srm
Enclosures

1500 Rhode Island Avenue, NW • Washington, DC 20005 • 202-462-6272

Statement for the Record
Before the
Subcommittee on Surface Transportation
of the
House Public Works and Transportation Committee

Re: Reauthorization of the Hazardous Materials Transportation Act

---

On Behalf of
National Paint and Coatings Association, Inc.

ORIGINAL

Date Submitted:
June 3, 1988

Submitted by:

Peter M. Berkery, Jr., Counsel
National Paint and Coatings Association, Inc.
1500 Rhode Island Avenue, N. W.
Washington, D. C. 20005
Telephone: (202) 462-6272

Statement for the Record
Before the
Subcommittee on Surface Transportation
of the
House Public Works and Transportation Committee

Re: Reauthorization of the Hazardous Materials Transportation Act

---

On Behalf of
National Paint and Coatings Association, Inc.

INTRODUCTION

This statement is submitted on behalf of the National Paint and coatings Association, (hereinafter referred to as NPCA). NPCA is a voluntary, non-profit industry association organized in 1888 and comprising today approximately 900 members who are engaged in the manufacture and distribution of paint, varnish, lacquer, and allied products or the materials used in such manufacture. The membership of NPCA collectively produces about 90% of the total National volume of paint, varnish, lacquer, and allied products. Most of these facilities are small business entities: 60 percent of NPCA members' manufacturing facilities employ fewer than 20 people. A total of about 60,000 people are employed by the paint and coatings manufacturing industry.

As with any manufacturing sector, the makers of paints and coatings also are shippers of their products and are directly concerned with all issues affecting transportation. Moreover, many paints and coatings obtain characteristics which might be deemed hazardous under inappropriate transportation circumstances. A single paint and coatings manufacturing facility may have need of more than 1,500 different chemicals for the formulation of its full line of finished paint products over a given year. Accordingly, NPCA has a vital interest in the transportation of hazardous materials.

The NPCA has testified previously before the Transportation, Tourism and Hazardous Materials Subcommittee of the House Energy and Commerce Committee, July 30, 1987 on this issue. We agree that certain aspects of the Hazardous Materials Transportation Act are not as effective as they might and should be. Quite simply, some aspects of the HMTA need strengthening. To that end, NPCA fervently supports H.R. 4069. Particularly, this Bill addresses two of the most significant shortcomings of the current regulatory scheme: lack of uniformity among Federal, State, and local laws and burdensome, oftentimes ill-advised if not even more perilous, routing restrictions.

H.R. 4069 would eliminate the existing patchwork of laws regulating the transportation of hazardous materials through the promulgation of a single, preemptive National standard to which States and localities would be required to adhere. The bill also retains the flexibility needed to address legitimate local concerns, but would not permit individual jurisdictions to pass laws inconsistent with or in conflict with the new standard.

Uniformity of transportation requirements are essential to efficiency and optimum compliance. A transportation vehicle is by nature a transient target of regulation. This distinguishes it from fixed-site manufacturing operations. Safety does not recognize political boundaries and parochial politics should not be permitted to compromise safety.

The paint and coatings industry is very familiar with the need for uniformity; seven years of protracted negotiations and litigation with the City of New York have demonstrated the potential frustration for enforcement of the current Federal regulatory scheme engendered by ill-conceived local rules.

NPCA v. NEW YORK CITY

NPCA presently is involved in litigation with New York City over its hazardous materials transportation regulations. [National Paint and Coatings Association, Inc. v. New York City, et al., Case No. 94-CIV-4525 (ERK) (E.D.N.Y, 1984)] The central question in this case is whether the City may impose regulations upon shippers and carriers that are different from and conflicting with the U.S. Department of Transportation's Hazardous Materials Regulations.

At stake in this litigation is the basic principle of uniformity and the compromise to safety by the absence of uniformity. The actions of one local government threaten a severe disruption to interstate commerce and eventually will force the exodus of the remaining paint manufacturing facilities located in New York City. At issue is whether a local jurisdiction has the right, in the face of a well-defined National regulatory scheme, to arbitrarily declare the Federal government's regulations inadequate and proceed to construct regulations so different that they result in prohibiting shipments of hazardous materials which are in full compliance with the Federally mandated requirements.

In an attempt to convey why NPCA perceives a strong need for some reform in the current HMTA enabling statute, it would be useful to describe our ongoing dispute with the City of New York. Over the past six years, New York area paint manufacturers and raw material suppliers have been cited for violations of New York City's Administrative code in relation to hazardous materials transportation.

These violations include transporting hazardous materials without a valid New York City permit and without specifically authorized New York City equipment, drivers working without certification from the City, transporting hazardous materials during curfew hours, and transporting on roads not designated by the City's authorized routing scheme.

The problem dates back to 1980, when the City proposed new routing and curfew requirements for the transportation of hazardous materials to, through and from the City. Upon examination of these requirements, it was discovered that the then-current New York City Administrative Code contained hazardous materials transportation requirements which were both obsolete and in direct conflict with Federal regulations. As a result, the industry undertook good faith negotiations with City officials to update and restructure the regulations into a more effective and reasonable system. The negotiations lasted nearly two years and reached a stalemate in December 1982.

There was no other communication between the industry and the City until August 1983 when NPCA became aware of further citations against member companies. The paint industry then asked for clarification from the Mayor's office and the fire department. Their response did not satisfactorily resolve the dispute.

In 1984, the National Paint and Coatings Association, Inc. along with the American Trucking Associations, Inc., filed suit against he City of New York, the New York City fire and police departments. The action sought to enjoin the implementation and enforcement of regulations promulgated by the above-named defendants. Specifically, NPCA has argued that these regulations are unlawful when set against the Commerce Clause of the United States Constitution and are preempted by the Hazardous Materials Transportation Act and the regulations promulgated thereunder.

Early on, the court trying this case rejected an NPCA Motion for Summary Judgment, ruling that it was unclear as a matter of law whether Congress intended to occupy the field when it enacted the HMTA.

Since that time, the situation has improved somewhat. In December 1987, the U.S. Department of Transportation issued an Inconsistency Ruling which held the New York City regulations were preempted by the Federal regulatory scheme. [52 FR 46574, Inconsistency Ruling No. IR-22; Docket No. IRA-40A] Such rulings are in accordance with Section 112 of the HMTA. [49 USCA §1811] The agency was acting in response to a petition filed some six months earlier by the American Trucking Associations. In its decision, DOT held that virtually all New York City design, construction and permitting standards, as well as vehicle equipment specifications, are inconsistent with Federal law. The judge in the pending litigation has indicated a willingness to reconsider the industry's Motion for

Summary Judgment in light of the Inconsistency Ruling. Based on this ruling, the defendant Port Authority of New York and New Jersey entered into a settlement agreement with NPCA, granting the industry all of the relief it sought in Court. The remaining defendant, the City of New York, immediately filed an appeal of the DOT ruling. [53 FR 5538, Appeal of Inconsistency Ruling No. IR-22; Docket No. IRA-40A]

Further, on May 10, 1988, the Department of Transportation issued a second Inconsistency Ruling which essentially applied the findings of its earlier determination to the Hazardous Materials Transportation Regulations of the New York City Fire Department. [52 FR 16840, No. IR-23; Docket No. IRA-40B] Again, DOT ruled inconsistent virtually all fire department requirements relating to equipment standards, routing, and time of day restrictions.

While this would seem to be good news, the Inconsistency Rulings do not have the binding force of law. The City of New York may still issue citations against a carrier deemed to be in violation of local regulations. The cited carrier may then use the Inconsistency Rulings to argue in Court that the citation should be dismissed. In other words, the Rulings are merely evidence, albeit highly persuasive, to be used at a Court hearing. Additionally, as mentioned above, the City has appealed the DOT determination, creating further expense and delay in resolving this matter.

The legal proceedings drag on, and the expenses mount. NPCA is confident that it ultimately will prevail in this protracted litigation. We are equally confident that it is only a matter of time before some other local jurisdiction adopts inconsistent and burdensome regulations pertaining to the transportation of hazardous materials. NPCA continues to aggressively pursue this costly litigation in protest of the dangerous precedent the New York City regulations create.

SOLUTIONS THROUGH THE HMTA

Under the authority granted by the statute, the present administration of the HMTA, by NPCA's observation, has been largely ineffective in assisting the Courts in the resolution of the difficult issue of Federal preemption. As a result, the industry is faced with an increasingly complex patchwork of multiple, diverse, and sometimes incompatible local regulations. The destination of a shipment often determines which regulations it must follow. Although each municipality believes its regulations to be reasonable, when taken together, they add up to an unreasonable burden on industry, with no accompanying enhancement of safety. In fact, we suspect the resulting circuitous routing over secondary rural arteries frequently increases the peril to the community and general public.

Congress was not unmindful of the potential for this problem when it passed the HMTA. Under the Act, it was "...declared to be the policy of Congress...to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against the risks to life and property which are inherent in the transportation of hazardous materials in commerce." [49 USC §1801] Included in the HMTA were some provisions pertaining to the relationship of the Act to State and local laws. Section 112 declares preempted any requirement of a State or political subdivision thereof which is "inconsistent with any requirement or regulation issued under [this Act]." [49 USC §1811(a)] As noted in HMTA's Committee report, this provision was intended to "preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous materials transportation." [S. Rep. No. 93-1192]

Experience over the last few years has demonstrated this mechanism to preserve "consistency" has been inadequate and unreliable in maintaining the proper relationship between Federal, State, and local authority in this area. The reluctance on the part of the judge in the New York City litigation to declare as a matter of law that the field of hazardous materials transportation has been preempted by the Federal government is indicative of this uncertainty.

The amendments to the HMTA proposed in H.R. 4069 would rectify this problem and at the same time safeguard the legitimate interests of State and local governments. NPCA affirms the need for State and local authorities to have a role in the regulation of hazardous materials. This role should be one of enforcement and compliance, not one of promulgating the basic regulations which control the free flow of commerce. Certain areas of regulation must be exclusively under the Federal domain. These include vehicle specifications, classification and definition of hazardous materials, packaging specification and hazard communication requirements such as shipping papers, placards, and labels. The resources of the States should be left to enforcement and compliance, including improved local emergency response training. This would not only promote the free flow of interstate commerce, but would direct the resources to where the need is greatest: accident prevention.

H.R. 4069 would provide needed relief to transporters of hazardous materials in one other critical area -- routing requirements.

Many State and local jurisdictions regulating the transportation of hazardous materials place significant restrictions on the routes transporters may use when passing through their territory. These restrictions usually have two effects. First, they serve to export the burden to neighboring jurisdictions, which may or may not be in a position to respond in a crisis situation. Frequently, a large city, which presumably has greater expertise and resources, will pass a law which simply shifts the risk to less-prepared rural areas. While this may be politically expedient, the rural roads may not be as safe, and the response personnel will surely not be as well trained.

Second, the imposition of arbitrary routing restrictions usually results in longer hauls. The increased time in transit statistically increases the likelihood of an incident. The longer a shipment is on the road, the more time there is for something to go wrong.

The promulgation of a uniform National routing standard like the one proposed in H.R. 4069 will alleviate these problems while still giving States and their subdivisions the flexibility needed to address legitimate local safety concerns. The uniform Federal standard is critical to and goes hand-in-hand with the other aspects of Federal preemption discussed above.

Although the instant proposal goes a long way toward eliminating the shortcomings of the original Act, there are some minor alterations in the form of "fine tuning" which NPCA respectfully suggests should be made to H.R. 4069.

First, in determining whether a civil penalty is to be imposed on those in violation of HMTA, the Bill eliminates the term "knowingly" from Section 110 of the Act. The membership of NPCA is adamantly opposed to the imposition of a strict liability standard on the transporters of hazardous materials. Fundamental fairness dictates that some finding of negligent conduct should be a prerequisite to the imposition of liability.

Additionally, H.R. 4069 creates important selection criteria to which States and localities must adhere in promulgating hazardous materials routing requirements. Notably missing from these performance standards is the input of affected industry. NPCA urges that the process of State selection of highway routes be required to permit, indeed encourage, the participation of all interested parties, including shippers and carriers.

With these minor modifications, the NPCA lends its support to H.R. 4069. Based on our experience, set forth in the foregoing, H.R. 4069 is the most workable solution to problems arising in the administration of the current HMTA.

CONCLUSION

It is NPCA's firm belief that the HMTA needs to be amended to provide for clearer and stronger uniformity. In order to accomplish this, the HMTA also must recognize that States and localities will bear the bulk of enforcement responsibilities. Accordingly, funding for training of emergency response personnel at the State and local level is essential to ensuring participation in an effective National program. A clear and strong expression by Congress in the HMTA that definitively establishes the Federal role in promulgating hazardous materials transportation regulations is the only way to ensure that an effective program to promote the safe transportation of hazardous materials is achieved.

Respectfully submitted,

Peter M. Berkery, Jr., Counsel

National Paint and Coatings Association, Inc.
1500 Rhode Island Avenue, N.W.
Washington, D. C. 20005
Telephone: (202) 462-6272

Date submitted:

June 3, 1988

ORIGINAL

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
SUBCOMMITTEE ON SURFACE TRANSPORTATION

WRITTEN STATEMENT OF THE
NATIONAL PRIVATE TRUCKING ASSOCIATION
ON
HAZARDOUS MATERIALS TRANSPORTATION SAFETY

MAY 25, 1988
WASHINGTON, D.C.

The National Private Trucking Association ("NPTA") welcomes this opportunity to present its views on the reauthorization of the Hazardous Materials Transportation Act.

NPTA is the national association of manufacturers, processors, distributors, and retail establishments that operate their own fleets of commercial motor vehicles incidental to and furtherance of their primary, non-transportation business enterprises.

NPTA's membership is comprised of more than 2100 national and regional corporations, and includes many of the Fortune 500 companies. In terms of their company and fleet sizes, the types of equipment being operated, source of drivers, fuel efficiencies, location of operations, annual mileage traveled, and other such analytical factors, the operations of the individual members of NPTA are representative of the interstate motor private carrier industry.

Many of NPTA's members have also obtained operating authority from the Interstate Commerce Commission and are engaging in for-hire operations as contract or common carriers. Thus, in the aggregate, NPTA's membership is representative of the interests of shippers, private carriers and for-hire carriers.

In their primary, non-transportation capacities, NPTA members are shippers who are involved in the manufacture, processing, distribution and/or sale of virtually every commodity being either produced in, or imported into, this country. The products of NPTA members include chemicals, electrical products, food and related commodities, wood products, metal fabrication, paper and allied goods, petroleum, rubber and plastic products, and textiles and apparel. Many of NPTA's members are, therefore involved in the transport of hazardous materials in commerce.

The Current Problems Being Experienced

Since the early 1980's, the public has increasingly become concerned about the safety of hazardous materials transportation. As the Office of Technology pointed out on page 3 of its 1986 report, "Transportation of Hazardous Materials" ("OTA Report"), much of the public's concern has been premised on two things: the perception that the transportation of hazardous materials is not a highly regulated area; and, the general lack of familiarity by State and local governments with, and mistrust of, the federal program. Thus, in their zeal to curtail the risks they perceive such transportation imposes upon their citizens, State and local governments have increasingly turned to enacting their own sets of unique laws, and along the way severely restricting and in some cases altogether banning the transport of hazardous materials through their communities.

The laws which State and local governments have enacted to address the transportation of hazardous materials have taken a number of different forms. Industry has been confronted by: outright bans; time-of-day restrictions which bear little if any relation to the time and manner in which commerce is conducted and often force trucks to stop enroute to await their expiration; route restrictions necessitating that shipments move on secondary highways or travel excessive and circuitous mileage; requirements that carriers must prenotify communities on a shipment-by-shipment basis within 24 or 48 hours of transport; requirements to obtain permits (both with and without fees) on a shipment-by-shipment, or truck-by-truck basis; and equipment specification restrictions and driver qualifications so unique that in one jurisdiction compliance precludes the use of vehicles and drivers that are required by and fully compliant with the federal regulations.

Regardless of the form a particular State or local law might take, and in spite of the good intentions of a State or locality to protect its citizens, the extent to which one State or local may increase its own level of safety has often come at the expense of the citizens of other States or localities, in addition to industry. In other words, the present regulatory system has made it easy for jurisdictions to export their risks to others.

Since 1974, the transportation of hazardous materials has been governed by the Hazardous Materials Transportation Act ("HMTA"), 49 U.S.C. 1801 et seq. As was observed in the legislative history to that act, a primary purpose of the HMTA was to develop a uniform, national set of regulations in order "to preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous materials transportation." S. Rep. No. 93-1192. To that end, therefore, Congress directed that State and local regulations which are "inconsistent" with the federal requirements are preempted.

Finetuning of the HMTA Is Now Required

In carrying out its mandate under the HMTA, the Department of Transportation ("DOT") has promulgated an extensive and comprehesive body of regulations, governing virtually every facet of hazardous materials transportation and made applicable to both the carriers and shippers of hazardous materials as well as the manufacturers of the containers in which such materials are shipped. For the most part, the regulatory structure created by the HMTA, and the regulatory program that has resulted therefrom, has been extremely successful in ensuring that Congress' commitment "to protect the Nation adequately against the risks to life and property which are inherent in the transportation of hazardous materials in commerce", 49 U.S.C. §1801, has been achieved.

Nonetheless, experiences over the last fourteen years have demonstrated that some finetuning of the HMTA is now in order. For example, what is or is not "inconsistent" with a federal requirement, and thus preempted by the HMTA, has not always been clear. Neither has the answer always been easily attained. Under the design of the HMTA, States and localities are not required to seek a pre-implementational review of their hazardous materials laws, and in general there is little incentive for them to delay implementation pending a DOT inconsistency determination; in any event, the political benefits of enacting such laws can easily,, and often do, outweigh any potential adverse consequences to nonconstituents. Moreover, when DOT's opinion has been sought, the determination is often slow in coming, and even then it is only an advisory opinion. All to often, therefore, the determination of "inconsistency" has been left to the subjective, and invariably competing, interpretations of industry and the State or local government. As a consequence, many State and local requirements that are being enacted are not only inconsistent with the federal law, they also conflict with those of a neighboring State or locality. Clearly, this condition is not only contrary to one of the primary objectives of the HMTA -- "to preclude a multiplicity of State and local regulations and the potential for varying as well as conflicting regulations in the area of hazardous materials transportation", S. Rep. No. 93-1192, _supra_ -- it is contrary to the best interests of safety.

One of the few, albeit major, weaknesses of the HMTA was its failure to make the appropriate and necessary allocation of regulatory responsibilities between the Federal, State and local governments. Safety would be much better served were the HMTA to recognize that: (1) functional areas of expertise do exist among the various levels of government; and (2) to assign regulatory responsibilities based upon that expertise.

In practical terms, there are two broad subject areas which regulations governing the transport of hazardous materials must address -- technical and operational. The technical area involves matters such as the classification of materials; hazard communication; equipment specifications; and, driver qualification and training. DOT has developed a significant body of knowledge and expertise over the years. Given DOT's expertise, it makes little, if any, sense for States and in particular local governments to have to devote their finite resources to the promulgation of any technical regulations. DOT should therefore be given the exclusive responsibility for promulgating regulations governing _all_ technical areas, in intrastate as well as in interstate commerce. To the extent that a State or local government may have a concern about a particular technical regulation, such concerns could (and should) be expressed through the State's or locality's participation in the DOT rulemaking process rather than the adoption of a unique State or local requirement.

On the other hand, operational areas involving routing, time-of-day restrictions, and information requirements such as accident notification, are matters where the regulatory responsibility should be shared by the Federal and the State and local governments. Since States and localities are more familiar with their communities than the Federal government, it makes sense for them to have the authority to adopt restrictions governing routing. However, because their decisions can and usually do adversely affect nonconstituent communities as well, States and localities should be required to exercise such authority in accordance with standards promulgated by DOT; standards which, if followed, would be designed to insure that risk is not merely being exported. Thereafter, to the extent that disputes may occur between local communities within a single State, their resolution should be incumbent upon the State, whereas disputes between States should be resolved by DOT.

NPTA Is In General Support of H.R. 4069

Of all of the bills that have been introduced to amend the

HMTA, only H.R. 4069 would effectively accomplish these objectives. Among other things, passage of H.R. 4069 would:

* Properly assign regulatory responsibilities among the Federal, State and local governments on the basis of expertise and functional use of resources;

* Establish a functional process for States and local governments to follow whenever they seek to restrict routing, and the establishment of a rational procedure for resolving routing disputes; and

* Significantly improve and make more efficient the process for determining when a State or local restriction is harmonious with a Federal requirement and therefore should not be preempted.

Therefore, with the following exceptions, NPTA supports H.R. 4069.

NPTA's Concerns With H.R. 4069

First, with respect to routing, the bill is currently silent with respect to what, if any, role industry should play in the development of routing decisions by State and local governments. If safety is to be insured and unintended adverse consequences from routing decisions minimized, it is important for the State or local governments to know how a proposed routing decision can affect the operations of the business community. For example, suppose the city council of one of the larger cities is proposing time-of-day restrictions which will prohibit the transit of placarded loads of flammables, combustibles, and compressed gases during the hours of 7 a.m. to 9:30 a.m. and 3:30 p.m. to 6:30 p.m. -- this is typical of what a number of jurisdictions have sought to impose. Before such restrictions go into effect, that city council needs to know what the potential consequences of the restrictions will be. Will there be a need for trucks to stop and await the expiration of the time restrictions? If so, for how long? In whose community will the trucks be stopping? Will the trucks be forced to park along the shoulders of the highways if they have to stop, or will truck stops or other safe havens be available? How much traffic will this affect, and what types of materials will be affected? Will nonrestricted routes, including those in neighboring communities, be subject to increased traffic as a result of the restrictions? If so, what routes will be affected and are they, as well as the neighboring communities, capable of handling the increased traffic? How will local businesses be affected? What was industry doing, or failing to do, that necessitated time-of-day restrictions in the first place? Are there equally effective but less onerous ways of addressing the problem?

NPTA believes that industry's input -- from both shippers and carriers -- is not only vital in this regard, it should be statutorily required. Section 2 of H.R. 4069 should be amended to require that the routing standards ultimately adopted by the Secretary include a requirement that States or local governments seeking adoption of a routing designation must consult with members of the affected business community.

NPTA also has some concerns with the permit being proposed for carriers under Section 3. NPTA would support the limited permit program being proposed under the following conditions. First, that the application process is fair and not burdensome. NPTA's concerns here are twofold. The first concern is with that portion of the provision which would authorize the Secretary to amend, suspend, or revoke a permit "without the opportunity for a hearing" in cases of an "imminent hazard." While NPTA agrees that under such circumstances it would be impractical to require a hearing prior to amending, suspending or revoking a permit. At the same time, carriers should not be deprived of their right to a hearing within a reasonable time thereafter. As drafted, however, the provision could be construed so as not to require such a subsequent hearing. Section 3 should therefore be amended to make clear that a hearing following amendment, suspension or revocation of a permit in cases of imminent hazard is required. Our second concern is to ensure that the permit program which Section 3 would establish is not implemented as, or be allowed to become, a surrogate or substitute for the operating authorities being issued by the Interstate Commerce Commission. As the Committee well knows, shippers transporting their own freight are not required to obtain operating authority. NPTA is opposed to a change in that status. The legislative history to this provision should, therefore, make clear that such an outcome is not intended.

The standards for compliance with the permit must also be reasonable. In this regard, NPTA is concerned about the provision which would require that "[e]ach person who offers for transportation in commerce a hazardous material, may only offer such material to a carrier presenting a valid safety permit." Of concern here, is the exact duty this would impose upon shippers. As drafted, the provision could be construed to impose a duty on shippers to determine whether the carrier has a "valid" permit, as opposed to imposing a duty on shippers to ask for and look at a carriers permit to ensure that the carrier is in possession of a permit (with the presumption being that the permit is valid). NPTA would support the latter interpretation but not the former.

Additionally, the fee to be paid for obtaining a permit must be minimal and should not be permitted to exceed the direct administrative cost to DOT of issuing a permit, and duplicative permit programs of the States or local governments should be expressly precluded.

The last concern NPTA has with H.R. 4069 is with respect to Section 7. NPTA is opposed to striking the term "knowingly" from Section 110 of the HMTA, 49 U.S.C. §1810, governing civil penalties. Doing so would impose strict liability upon shippers and carriers of hazardous materials, regardless of the underlying or mitigating circumstances of a "violation." NPTA does not believe that DOT has demonstrated the need for imposing a strict liability standard.

CONCLUSION

The HMTA has served the Nation well in protecting the public against the risks inherent in the transportation of hazardous materials. Nonetheless, experience has also shown that some finetuning of the HMTA is now in order. The amendments contained in H.R. 4069 would effectively and functionally address the regulatory problems that have been experienced under the HMTA. Save for the specific concerns expressed in this statement, NPTA supports H.R. 4069 and urges its prompt passage.

1100 Seminary Street
P.O. Box 740
Rockford, Illinois 61105
(815) 987 2680
Telex 257 479

BEHR
PRECIOUS METALS COMPANY
a Joseph Behr & Sons Inc. Company

May 20, 1988

Representative Glenn Anderson (CA)
Public Works and Transportation
U.S. House of Representatives
Washington, DC 20006

Dear Representative Anderson:

We have recently been made aware of HR3334, "Hazardous Materials Transportation Amendments of 1987", and are strongly opposed to such legislation for the following reasons:

1. We object to a company not involved in the recycling industry monitoring DOT information.

2. The costs to the recyclers will be much greater than that which is indicated since cellular telephones and computers will be involved as well as processing fees.

3. As part of DOT regulations, drivers who handle hazardous materials are trained.

4. The current "manifest" system fulfills adequate information for emergency response.

We ask that you reject HR3334 as being unwieldy, costly and redundant to existing regulations.

Thank you for your attention in this matter.

Very truly yours,

BEHR PRECIOUS METALS

Ronald Rosenson

Ronald Rosenson
President

RR/blm

RECEIVED
JUN 6 1988
[illegible]

8/11
6-13-88

NPGA
National PROPANE GAS Association
1235 Jefferson Davis Highway • Arlington, Virginia 22202 • 703/979-3560

RECEIVED

JUN 2 4 1988

June 13, 1988
File: 390.7/88-4

734
7-1-88

The Honorable Glenn Anderson
Chairman
Subcommittee on Surface Transportation
Committee on Public Works and Transportation
United States House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

The National Propane Gas Association offers the following comments on the Reauthorization of the Hazardous Materials Transportation Act of 1974 (HMTA) and requests that these comments be made a part of the record of the hearing conducted by your Subcommittee on May 19 and 25, 1988.

The National Propane Gas Association (NPGA) is the national trade association of the propane gas industry with a membership of about 4,000, including 47 affiliated state and regional associations, representing all 50 states. NPGA represents all segments of the propane gas industry including producers, transporters, wholesalers, retailers, and the manufacturers and distributors of associated equipment and appliances.

Propane gas is transported by all modes - truck, rail, pipeline and tanker or barge - with about 95% of the product being transported by cargo tank truck at one time or another. Your Subcommittee should therefore appreciate that NPGA is deeply interested in any amendments to the HMTA since our membership includes all who are covered by the HMTA: container manufacturers, shippers, and carriers.

NPGA (formerly the National LP-Gas Association) has been an active participant in the work of a coalition of industry and state/local groups for about six years seeking to resolve obstacles to effective and necessary amendments to the HMTA. We were pleased that these hearings were called and hope that it signals a serious effort to secure enactment of substantive reauthorization legislation during the time remaining in the 100th Congress.

STATEMENT OF GENERAL INDUSTRY POSITION

As noted earlier, the largest single group of members within the NPGA are retail marketers of propane gas. These companies supply propane to millions of American homes, businesses and industry for such purposes as heating, cooking, water heating, agricultural and industrial applications, and engine fuel (automotive and lift truck).

Propane is stored and transported as a liquid in specially constructed containers under pressure, but burned as a gas. At the burner tip, it is like natural gas; however, in its distribution, it requires thousands of delivery vehicles which must be able to move unimpeded through and around cities, towns and farmland to the ultimate consumer. Thus, for crop drying seasons, at tobacco curing time, and during winter cold spells, it is important that this essential energy source reach its ultimate destination without interference or delay.

With these thoughts in mind, NPGA's position on amendments to the HMTA has been guided by certain underlying principles:

- Uniformity: There must be a uniform federal-state-local regulatory scheme for the transportation of hazardous materials. Matters pertaining to "technical" areas such as container and tank construction, vehicle placarding, package marking and labeling, shipping papers, and hazardous materials definitions should be left to the province of the federal government for regulation promulgation.

Uniquely local situations which require a state or local regulatory approach such as time-of-day restrictions, bans, routing, and pre-notification are areas of concurrent jurisdiction and should be addressed at the state and local level through the use of public-private sector task forces based on criteria specified within the HMTA and using guidance documents promulgated by the U.S. Department of Transportation (DOT).

NPGA opposes time-of-day restrictions, routing, and local notification schemes, particularly regarding local deliveries of essential and common energy fuels such as propane gas. In the early to mid-1970s, propane gas was one of many petroleum products placed under federal mandatory price and allocation controls due to perceived "shortages" of product supplies. In most instances, these "shortages" were really breakdowns in the nation's distribution system. To permit states or localities to indiscriminately ban, restrict, or route needed supplies of fuels such as propane at times of need can recreate these distribution breakdowns and again lead to fears of "shortages".

A recognition of the essentiality of residential and agricultural product movements and a cooperative effort between industry and state/local governments is mandatory.

- Enforcement: The enforcement of tank and container construction standards should be within the sole province of the federal government. Enforcement of all other federal hazardous material regulations should be shared by the federal government and state and local authorities; provided, that such enforcement is uniform and consistently applied.

- Emergency Response: NPGA recognizes the need for strong coordination and total involvement of all parties in emergency response. Thus, although state and local fire, police and emergency personnel are generally the first on the scene, they should act in cooperation and consultation with federal officials and industry personnel who can lend significant expertise and talent in emergency situations. Again, this is an area where industry's unique training and qualifications should be recognized and utilized.

In this regard, NPGA has been the principal advocate for nationwide adoption of "Good Samaritan" legislation designed to protect from liability those who voluntarily and in good faith offer assistance to fire and police at the scene of a hazardous material incident. Since 1978, 44 states have enacted some form of the model Good Samaritan legislation first drafted by NPGA and now supported by a coalition of organizations under the auspices of the Hazardous Materials Advisory Council.

- Emergency Responder Training: States and localities express continued concern about the kinds and quantities of hazardous materials passing through their jurisdictions. There are repeated requests for training of emergency responders and financing for the purchase of equipment to facilitate their ability to respond to any incident. While their concerns may be legitimate, we believe that before enactment of any major new program designed to identify each and every shipment of hazardous materials or the establishment of multi-million dollar training funds, a thorough assessment of current training programs, response capabilities, and available resources be made.

For example, NPGA and our affiliated state associations have maintained an active program of training and educating fire personnel for over three decades. Because of the thousands of local propane gas marketers and our network of affiliated state associations, we have been able to provide hands-on propane gas emergency response training directly to local fire companies and police departments throughout the nation for over 30 years.

We believe other organizations in the hazardous materials industry have made similar efforts to assist states and localities in their ability to respond quickly to a hazardous material incident. The Chemical Manufacturers Association, for example, has sponsored for over a decade industry's premier emergency response coordination center, CHEMTREC, and more recently has created additional programs to assist states and localities both in training and in actual response efforts.

- Registration, Licensing, Permits: NPGA opposes any blanket registration, licensing, or permitting program as a precondition to doing business. To advocate otherwise would be to turn the clock back and ignore the major efforts that have been made within the past decade toward deregulation of all industries. We firmly believe that the marketplace, coupled with an effective safety regulatory program, is the best regulator.

Where there may be a proven need for close control over the movement of certain ultra-hazardous materials, we see no justification for sweeping registration requirements which could encompass the entire hazardous material industry.

SPECIFIC RECOMMENDATIONS

While numerous proposals are currently pending to amend the HMTA, NPGA believes that the Administration's proposal (H.R. 4069) most closely embodies the principles enumerated above and which we believe are essential to amend and improve the HMTA. We urge your Subcommittee to take immediate action to approve and send on for further consideration H.R. 4069, with two minor changes:

1. The proposal to revise the definition for "imminent hazard" should be deleted: as proposed, it would grant an extraordinarily broad mandate to act regarding any condition presenting "some potential" for serious harm. NPGA submits that the standard for "some potential", if it exists at all, is vague, undefined and overly broad. The current standard of "substantial likelihood" is well settled in the law and should be retained.

2. That part of Section 7 of the bill which proposes to strike the word "knowingly" from the HMTA wherever it appears should be deleted. To require something less than a knowing violation of the HMTA opens the door to a multitude of vexatious claims and costly litigation for members of the hazardous materials industry. The HMTA and the Hazardous Material Regulations promulgated thereunder are too complex and too voluminous to permit a standard to exist where innocent and inconsequential violations can result in the assessment of severe fines and penalties.

CONCLUSION

NPGA would be pleased to assist the Subcommittee in its further deliberations on this subject. If we can provide any additional information or assistance, please do not hesitate to contact us.

Respectfully submitted,

Daniel N. Myers
Vice President, Government
Relations & General Counsel

DNM:em

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION
Washington, DC

HEARINGS ON REAUTHORIZATION OF HAZARDOUS MATERIALS TRANSPORTATION ACT

STATEMENT OF THE REGULAR COMMON CARRIER CONFERENCE

James C. Harkins
Executive Director
Regular Common Carrier Conference
Suite 350, 2200 Mill Road
Alexandria, Virginia 22314
(703) 838-1971

DATED: June 8, 1988

BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON SURFACE TRANSPORTATION
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

Washington, DC

HEARINGS ON
REAUTHORIZATION OF HAZARDOUS
MATERIALS TRANSPORTATION ACT

STATEMENT OF THE
REGULAR COMMON CARRIER CONFERENCE

Mr. Chairman and members of the Committee, I appreciate this opportunity to comment on H.R. 4069, a bill to amend the Hazardous Materials Transportation Act. I am James C. Harkins, Executive Director of the Regular Common Carrier Conference (RCCC). The RCCC is a national trade association comprised of approximately 325 trucking companies that transport freight of all kinds, including hazardous materials, in interstate and intrastate commerce. In fact, these trucking companies collectively comprise the largest group of motor carrier transporters of nonbulk hazardous materials. As such, the RCCC trucking companies have a substantial interest in hazardous materials regulations.

The RCCC strongly supports enactment of H.R. 4069, with minor modifications. The bill is a positive measure that will promote safety and efficiency in hazardous materials transportation by enhancing the federal government's involvement. Specifically, RCCC's position on the various provisions of H.R. 4069 is as follows:

1. Technical and Operational Matters

The federal government must have sole authority for and responsibility over technical and operational issues. These areas include:

(a) the designation, description, and classification of hazardous materials;

(b) the packing, handling, labeling, marking, and placarding of hazardous materials;

(c) documentation, description, and preparation of shipping documents;

(d) reporting requirements for the unintentional release of such materials and data collection on such incidents; and

(e) the design, construction, marking, maintenance, repair, and testing of all packaging and containers used in such transportation.

Section 4 of H.R. 4069 properly vests the U.S. Department of Transportation (DOT) with exclusive jurisdiction in these areas. These handling and operational rules must be uniform. The trucking industry cannot operate under a myriad of equipment, packaging, and labeling rules that change from jurisdiction to jurisdiction.

It should be emphasized that DOT currently has detailed regulations in this area. Its regulatory program is effective and constantly refined through proposals from the industry, interest groups, and the government -- including state and local governments.

2. Routing

The RCCC supports the proposed routing procedure and criteria in H.R. 4069. It retains the right of states and local government to devise routing schemes provided they promote safety and do not unduly burden commerce. It is important that highway route designations be designed to promote the public interest, rather than serve as a means to further nonsafety objectives by exporting risks to other jurisdictions. The requirement of prior consultation with affected jurisdictions is an important factor to ensuring reasoned decision making. The proposed dispute resolution procedure is appropriate.

The RCCC would recommend, however, that the bill mandate, rather than merely allow, the Secretary of DOT to issue standards for designation of routes. This would ensure compliance with the basic criteria outlined in the bill.

3. Safety Permits

The RCCC also supports the provision in H.R. 4069 which directs the Secretary to establish a system of safety permits for the transportation of any class A or B explosives, any hazardous material which has been designated as toxic by inhalation, or any highway route controlled quantity of radioactive materials. This provision should be applicable to every mode of transportation since the hazards of these materials are present regardless of how they are transported.

The RCCC supports the concept of immediate suspension or revocation of a safety permit if there is a serious safety problem. The definition of an "imminent hazard" proposed in H.R. 4069, however, is too broad and subjective. It would permit the government to shut down a carrier or vehicle when "some potential of serious harm will occur prior to a hearing." The Motor Carrier Safety Act of 1984 contains a more focused standard. It defines an imminent hazard as "any condition of vehicle, employee, or commercial motor vehicle operations which is likely to result in serious injury or death if not discontinued immediately." (49 U.S.C. 521(b)(5)(B)). The RCCC recommends adoption of that definition.

4. Penalties

Section 7 of the bill proposes to make persons liable for civil penalties even for a violation which was not knowingly committed. Consequently, carriers could be liable for fines up to $10,000 per day for relatively minor violations of complex and voluminous regulations. This is too harsh. Thus, the current law should be retained.

5. Fee and Permit Structures

Today, the trucking industry is being inundated by state and local ordinances which mandate that carriers of hazardous materials obtain a permit and/or pay a fee when transporting regulated commodities into, out of, or through their jurisdiction. Such permit/fee structures may be applicable to either individual or all vehicles operated by a carrier. This taxation and permitting is unduly burdensome. Such structures are burdensome not only because of their excessive fees, but they also create administrative nightmares and unnecessary delays. For instance, the nation's largest LTL carriers operate approximately 7,000 vehicles. Given the hundreds of state and local jurisdictions, there is no known data base upon which a carrier can rely to determine which jurisdiction has a permit/fee structure and/or the applicable local requirements for compliance.

The RCCC trucking companies, however, recognize the need for funds to improve training and equipment of public responders to hazardous materials incidents. Accordingly, we support a carefully structured federal fund to meet such needs provided that the sources of revenue for the fund are equitable for all modes of transportation and include shippers and container manufacturers. We cannot support funding based solely on revenues derived from the Highway Trust Fund and other special taxes on highway transportation.

SUMMARY

The RCCC supports H.R. 4069 with the minor modifications discussed above. We believe that the bill will best promote the safe, efficient transportation of hazardous materials through a heightened federal role. It accommodates the legitimate safety interests of state and local governments, while ensuring that commerce is not unduly burdened.

The RCCC recommends prompt action of this important legislation.

Respectfully submitted,

James C. Harkins
Executive Director
Regular Common Carrier Conference
Suite 350
2200 Mill Road
Alexandria, Virginia 22314
(703) 838-1971

STATEMENT OF HARVEY W. SCHULTZ, COMMISSIONER
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OF THE CITY OF NEW YORK
BEFORE THE SUBCOMMITTEE ON ENERGY
AND THE ENVIRONMENT OF THE
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

May 12, 1988

In response to hearings before the Committee on improving safety in the transportation of nuclear and other hazardous materials, the New York City Department of Environmental Protection is pleased to submit the following testimony to be included in the hearing record.

TRANSPORTATION OF NUCLEAR WASTE (Consideration of H.R. 3836, 1649, 3598, 4041, 3077 and other matters).

The City of New York was one of the first jurisdictions in the nation to confront the problem of the transportation of nuclear waste. The City has testified before Congress that, at a minimum, before spent nuclear fuel is transported through densely populated urban jurisdictions, a full environmental review, including consideration of alternative modes should be performed. In this regard, the City urged the Federal government to consider barging as an alternative to highway transportation. Although some 70% of the nation's nuclear reactors are located on waterways, the Federal government has stubbornly refused to investigate this alternative.

In 1981, U.S. DOT adopted a regulation known as HM-164 which preempted a previously-enacted City ban on the transportation of spent nuclear fuel from Brookhaven National Laboratories (BNL). The City of New York challenged HM-164, and was successful in the

District Court. However, on appeal in February 1984, the Supreme Court declined to review the Circuit Court opinion upholding the Federal rule. This removed the final legal obstacle to BNL's trucking their stockpile of spent nuclear fuel through New York City.

Since that time, the City has applied to U.S. DOT for a nonpreemption determination. Under Section 112(b) of the (HMTA), the Secretary of U.S. Department of Transportation is authorized to grant a waiver of preemption if a State or locality can show that its regulation provides greater safety and does not unreasonably burden interstate commerce. In connection with the City's nonpreemption application, and pursuant to U.S. DOT's suggestions, the City hired the firm of Arthur D. Little to perform a comprehensive risk analysis of alternative routes and modes for the shipment of spent nuclear fuel through or around the City of New York. The ADL study demonstrated that there are safer alternatives to highway shipment through the City.

U.S. DOT refused to consider the ADL study (which it had deemed to be necessary), and denied the waiver on the grounds that the City failed to meet a threshold showing of "exceptional circumstances", a requirement which does not appear in either the statute or regulations. DOT's refusal is an abdication of the agency's statutory responsibility under the HMTA to consider alternatives which provide equal or greater safety than highway shipment, and pose no undue burden on commerce. The City's subsequent appeal of U.S. DOT's denial was similarly denied, again with no review of the ADL study. The City has recently filed suit in Federal Court challenging DOT's decision.

Although Connecticut has questioned the motives behind the City's waiver request, and contends that the City is simply attempting to shift the burden of nuclear waste transport from its own backyard, this is not the case. As noted, the City's waiver request is founded upon on expert analysis in conformity with DOT guidelines, and the City's lawsuit seeks merely to require DOT to live up to its statutory responsibility and determine whether the alternative route through Connecticut provides greater safety without unreasonably burdening commerce.

It is clear that legislative reform is needed with respect to the routing of radioactive waste through densely populated urban areas. The City is gratified to see a number of bills before Congress which attempt to minimize the risks inherent in the transportation of high level nuclear waste and spent fuel by paying closer attention to packaging standards, route selection and emergency response and mitigation planning. In the area of routing nuclear waste, two bills which deserve comment are H.R. 3836, introduced by Congressman Owen on December 22, 1987 and H.R. 1649 introduced by Congressman Gunderson on March 17, 1987. While both of these bill would require Federal authorities to weigh environmental impacts of designating a route before issuing a license to transport, H.R. 3836 is more comprehensive and more carefully sets forth the rights of local government in the process. H.R. 3836 would also eliminate the need for local government to meet the so-called "threshold tests" (i.e. unique physical conditions or exceptional circumstances), which the U.S. Department of Transportation has unilaterally imposed on the City's waiver request to demonstrate a safer route and which the City is challenging in Federal Court. Although the City differs with Congressman Roland of Connecticut as to the applicability of the "threshold tests", we are happy to see that he does not favor a complete elimination of the nonpreemption option for localities. We believe that H.R. 3836 preserves that option by permitting local government to demonstrate a "significantly safer route", thereby maintaining the proper Federal/State balance which presently exists under the HMTA.

We also support adoption of H.R. 3598 (introduced by Congressman Meyer on November 3, 1987) which would increase Federal inspection of nuclear waste shipments, and H.R. 4041 (introduced by Representatives Buechner and Ackerman on March 1, 1988) which would require Nuclear Regulatory Commission certification of packages used to transport spent nuclear fuel and high-level nuclear waste.

Finally, H.R. 3077, introduced by Congressman Morrison of Washington on August 3, 1987 would permit states to impose a whole host of regulatory controls including permits, transport fees, inspection, and where no practical alternative exists, outright bans through urban areas. While we certainly favor the right of States and localities to charge fees for emergency response preparation, inspection, and enforcement, the right to ban shipments of spent nuclear fuel and high-level radioactive waste is a power which can be abused, and lead to the type of not-in-my-backyard syndrome which can defeat this nation's ability to safely transport nuclear waste to designated disposal sites. We therefore oppose this bill.

HAZARDOUS MATERIALS TRANSPORTATION

A recurrent theme running through much of the testimony before this subcommittee is the call for greater uniformity and consistency in hazardous materials transport regulations. In fact, the call for uniformity is an oversimplification of an exceedingly complex problem which involves a number of competing interests and goals. On the one hand, the Federal government wants to maintain national preeminence in the field of hazardous materials transportation, and would severely restrict the permissible scope of State and local regulations. On the other hand, many States and localities, especially those with densely populated urban areas, believe that the Federal government has not done enough to address their concerns, and jealously guard their right to regulate the area of highway safety, thereby filling what they perceive to be a vacuum left at the Federal level. The solution to the problem requires a delicate balance between these two competing interests.

Current Legislative Issues (H.R. 4069 and related legislation)

A. Routing and Curfew Requirements

Because local officials are in the best position to evaluate unique local circumstances, routing is an important tool for local governments in preventing or reducing the consequences of hazardous materials accidents. Under the current HMTA, the only regulations applicable to routing of non-radioactive hazardous materials require that shippers avoid densely populated areas, narrow streets and alleys, even if such routes would be more convenient for the shipper, 49 CFR §379.9(a); and that hazardous materials are to be transported without "unnecessary delay", 49 CFR §177.853(e). New York City was one of the first jurisdictions in the nation to enact comprehensive routing and curfew requirements for hazardous materials being transported through the City without a City permit. The routing regulations allow a practical alternative to travel through densely populated areas, narrow streets and alleys, and are consistent with the above-cited Federal regulations. The curfew requirements restrict transportation of flammable and combustible materials passing through the City in tank trucks or other vehicles not meeting City specifications to non-rush hours, i.e., 9:00 a.m. to 4:00 p.m. and 6:00 p.m. to 7:00 a.m.

These routing and curfew requirements for hazardous materials were enacted in the aftermath of an incident a number of years ago when a tank truck carrying liquefied propane gas developed a leak while crossing the George Washington Bridge. The incident tied up traffic for seven hours and resulted in the evacuation of thousands of people from adjacent apartments because of the danger of explosion from the escaping gas. The incident demonstrated the vulnerability of City highways to a major traffic mishap involving hazardous materials, and the need to reduce that risk by limiting hazardous cargo to non-rush hours when the ability of emergency reponse personnel to reach the scene of an accident is improved.

Both Ritter Inc., the shipper involved in the George Washington Bridge incident and the National Tank Truck Carriers Inc. challenged the City's regulations (which prohibited the transportation of hazardous gases over the George Washington Bridge unless the shipper had received permission from the Fire Commissioner) as being inconsistent with the HMTA and DOT regulations. The plaintiffs argued that the City's regulations created "unnecessary delay" in violation of 49 CFR 177.853 because they forced shipments around the City and shifted the risk to adjacent communities. In affirming the District Court's upholding of the regulations, the Second Circuit Court of Appeals held that "the New York City routing requirements impose only a necessary delay, and allow a practicable alternative to travel through a densely populated area, as 49 C.F.R. 177.853(a) and 379.9 (a) permit." See, City of New York v. Ritter Transportation, Inc., 515 F. Supp. 663 (S.D.N.Y. 1981), aff'd sub nom National Tank Truck Carriers, Inc., v. City of New York, 677 F. 2d 270 (2d Cir. 275). The U.S. Department of Transportation has declined to follow the Second Circuit's decision and recently held that the City's routing and curfew requirements were inconsistent with the HMTA. RSPA's decision is being appealed.

The Research and Special Programs Administration (RSPA) of the United States Department of Transportation claims that there is a need for greater uniformity in the routing of hazardous materials. RSPA proposes to preempt States and localities from adopting routing requirements for non-radioactive hazardous materials except in accordance with Federal standards and has set forth this proposal in H.R. 4069, a bill which was introduced in the House on March 2, 1988. RSPA's argument for more sweeping preemptive authority is based on the premise that a multiplicity of State and local routing rules has the potential to impede interstate commerce without enhancing overall safety.

It should not be assumed that all conflicts between the regulations of different jurisdictions will be so disruptive of national uniformity that a Federal standard is required. The question is one of degree. Clearly, a State or local routing regulation which causes unnecessary delay or needlessly shifts the risk of hazardous materials transportation to a neighboring jurisdiction is an obstacle to the improvement of overall public safety and should be preempted. However, if an alternative route bypasses a heavily populated area and does not unnecessarily delay transportation, it can result in a net safety benefit and should be permitted. Thus, the (potentially) conflicting jurisdictional interests must be viewed in the context of the concurrent jurisdictional interest, which is the safe transportation of hazardous materials. Local authority should not be preempted across the board in favor of a uniform system, nor should an elaborate justification of local regulations be required.

Rather, we favor the approach taken by Congresswoman Collins in H.R. 2650 introduced on June 10, 1981 which would require the Secretary to make grants for route designations and require States and localities receiving grants to designate routes and parking sites for vehicles transporting hazardous materials as per Federal guidelines. However, we do take exception to Section 112 of the Collins bill regarding extension of the hazardous materials regulations to intrastate commerce for the reasons hereinafter set forth.

While DOT should have the explicit authority to preempt broad local requirements which amount to *de facto* bans on transportation, States and localities should continue to be free to enact reasonable routing and curfew requirements absent compelling evidence that they impede safety or unduly burden interstate commerce.

B. Extension of DOT's Legislative Authority to Intrastate Commerce

H.R. 4069 also includes an amendment to Section 103 of the HMTA to add intrastate commerce to the Act's jurisdiction. In our view, the impact of such an extension of legislative authority has not been sufficiently studied. Indeed, in a recent Advance Notice of Proposed Rulemaking (ANPR) [(52 Fed. Reg. 24195, at 24196 (June 29, 1987)], RSPA acknowledged that it was not able to make an assessment of the overall impact of such a proposal and was therefore soliciting comments on any potential impacts which might occur should the ANPR be adopted as a final rule.

According to RSPA, a report by the Office of Technology Assessment ("OTA") of the United States Congress entitled: "Transportation of Hazardous Materials" (July, 1986) suggested that safety would be enhanced by expanding RSPA's jurisdiction in two specific areas: container regulations and hazardous materials incident reporting. At the same time, OTA noted that there was a lack of information about the scope of existing State laws and regulations and that "(a)n assessment of State hazardous materials laws and regulations to determine whether they are more or less stringent than Federal regulations could be required". (OTA, at p. 198)

New York City is an example of a jurisdiction which has more stringent tank truck container specifications than currently required by Federal regulations. The City's concerns about embracing Federal standards in the area of Federal specification cargo tank container requirements were set forth in testimony submitted to the Transportation, Tourism, and Hazardous Materials Subcommittee of the House Committee on Energy and Commerce on July 30, 1987 and for the sake of brevity is incorporated by reference.

C. Preemption of State and Local Laws

In H.R. 4069, RSPA proposes to amend the purposes of the Act to elevate the interest of uniformity and continuity of commerce over the interests of safety. Currently, only State or local laws which are "inconsistent" with Federal law or regulations are preempted (49 U.S.C. §1811(a)). The fact that the HMTA contains a specific statutory provision limiting preemption to local rules which are inconsistent with Federal rules is strong evidence that Congress never intended for the Federal government to occupy the entire field of regulation of hazardous materials transportation. Indeed, the use of the word "inconsistent" in the Act's preemption clause has been held to mean that State laws which merely vary or differ from Federal law are not preempted. National Tank Truck Carriers v. Burke, 608 F. 2d 819,823 (1st Cir. 1979). DOT has stated that it agrees with this interpretation of the preemptive effect of the Act. See Inconsistency Rulings IR-7 through IR-15, 49 Fed. Reg. 46632 (November 27, 1984) ("[T]his express preempting provision did not intend the HMTA and its regulations to completely occupy the field of transportation so as to preclude any State or local action").

In a major restructuring of the Act, RSPA would scrap the "inconsistency" provision in favor of a provision which would preempt State or local regulation of certain specifically enumerated areas, and preempt all other State and local requirements that did not meet the statutory standards. Instead of enjoying a presumption of validity in favor of State or local regulation not "inconsistent" with the Act, States and localities would shoulder the burden of demonstrating that regulations meet the enumerated statutory criteria. There is little question that the RSPA proposal would severely and unnecessarily restrict the ability of localities to regulate in this area.

D. Waiver of Preemption

Section 112(b) of the HMTA provides that preemption of a State or local requirement is waived if the requirement meets a two part test: (1) it must afford an equal or greater level of protection to the public than is afforded by Federal requirements under the HMTA, and (2) it must not unreasonably burden commerce. Although these statutory requirements are clear, RSPA's unrestrained interpretation of the criteria for waivers makes it virtually impossible for an applicant to obtain a waiver in spite of an applicant's showing that the statutory requirements are met: DOT denied the City's application for a non-preemption determination on the grounds that the City failed to meet a threshold showing of "exceptional circumstances", a requirement which does not appear in the statute or regulations.

The issue of whether an applicant is entitled to a waiver if it can make the showing required by the statute, or whether DOT retains discretion to deny a waiver even if an applicant makes such a showing, was expressly left open by the Second Circuit Court of Appeals in City of New York v. United States Department of Transportation 715 F. 2d 732, 752, fn. 21 (2d Cir, 1983). By inserting the word "may" in the waiver of preemption provision, H.R. 4069 would effectively settle this issue in favor of the Secretary's discretion. But in so doing, the proposal would also seriously erode the usefulness of the provision itself as a mechanism for the assertion, and protection, of legitimate State and local interests. The statute requires that States and localities meet specified criteria before they impose more stringent requirements to meet unique local circumstances. Congress should not allow these efforts to be pitted against the Secretary's unlimited discretionary authority.

Finally, H.R. 4069 contains no time limitation on waiver applications. Although the proposal states that a party must seek judicial review within three months after "such decision becomes final", the time period for deciding a waiver application is left open. In the City's case, over two years elapsed before RSPA finally ruled on the City's waiver application. The failure to require the Secretary to expeditiously rule on a waiver application is a serious impediment to the ability of States and localities to secure more stringent requirements in a timely fashion.

A number of other bills such as H.R. 4153 (introduced by Congressman Gallo on March 15, 1988), H.R. 3682, (introduced by Congressman Campbell on December 2, 1987) and H.R. 3334 (introduced by Congressman Applegate on September 23, 1987), would require the Secretary to study the flow of hazardous materials and waste through States and political subdivisions. We have supported similar legislative proposals in the past because we believe that such a study will assist States and localities in identifying those routes which are particularly susceptible to hazardous materials accidents, and in improving local emergency capability where it is most needed.

Overall, we urge Congress to consider cautiously any expansion of the scope of DOT's preemptive authority at the expense of legitimate State and local safety and environmental concerns. Until States and localities can be assured that the Federal government is meeting its responsibilities to protect public health and safety no such expansion should be authorized.